C
P38uvb

UNIVERSITY OF PENNSYLVANIA BULLETIN

THE LIBRARY OF THE
APR 6 1951
UNIVERSITY OF ILLINOIS

The School of Education

FIVE YEAR PROGRAM
GRADUATE DIVISION
ILLMAN-CARTER UNIT

ANNOUNCEMENT
1951-1952

PUBLISHED BY THE UNIVERSITY
PHILADELPHIA, PENNSYLVANIA
FEBRUARY 28, 1951

UNIVERSITY OF PENNSYLVANIA BULLETIN
Vol. LI, February 28, 1951, No. 15

Published by the University of Pennsylvania, 3446 Walnut Street, Philadelphia 4, Pennsylvania, once in July, twice in September, October and January, three times in December and June, four times in February and May, five times in March and April. Entered as second class matter October 23, 1919, at Philadelphia, Pa., under Act of Congress of August 24, 1912.

UNIVERSITY OF PENNSYLVANIA BULLETIN

The School of Education

FIVE YEAR PROGRAM
GRADUATE DIVISION
ILLMAN-CARTER UNIT

ANNOUNCEMENT
1951-1952

PUBLISHED BY THE UNIVERSITY
PHILADELPHIA, PENNSYLVANIA
FEBRUARY 28, 1951

CALENDAR FOR 1951-52

SUMMER SESSION

1951

June 21, 22, 23,
Thursday, Friday, Saturday.....Registration of School of Education students, Eisenlohr Hall.

June 25, Monday.....Classes begin at 8:00 A. M.

July 4, Wednesday.....Independence Day Holiday.

July 10, Tuesday.....Last day to register for the major examinations and the comprehensive examination in Education for the M.S. in Ed. given on July 24 and 25.

July 24, Tuesday.....Major Examinations, M.S. in Ed., 1:30 P. M.

July 25, Wednesday.....Comprehensive Examination, M.S. in Ed., 1:30 P. M.

Aug. 2, Thursday.....Close of Summer School.

Aug. 3, 4,
Friday, Saturday.....Examinations, Summer School, first six weeks.

Aug. 6, Monday.....Classes begin, second six weeks.

Sept. 3, Monday.....Labor Day Holiday.

Sept. 14, 15,
Friday, Saturday.....Examinations, second six weeks.

Sept. 19, Wednesday.....Convocation.

FALL TERM

Sept. 24-27,
Monday-Thursday.....Registration and advising of new full-time students.

Sept. 24-29,
Monday-Saturday.....Re-examinations in Spring Term and Summer Session Subjects.

Sept. 26-Oct. 3,
Wednesday-Wednesday.....Registration of part-time and graduate students, 9 A. M. to 7 P. M. except Sat.; Sat. to 2 P. M.

Sept. 28, Friday.....Formal Opening Exercises.

Oct. 1, Monday.....Classes begin.

Nov. 21, Wednesday.....Thanksgiving Recess begins at close of classes.

Nov. 26, Monday.....Thanksgiving Recess ends at 8:00 A. M.

Dec. 3-8, Monday-Saturday.....Enrollment of full-time students for Spring Term.

Dec. 8, Saturday.....Final date for submission of completed Ed.D. reports to Candidates' Committees for February candidates.

Dec. 15, Saturday.....Last day to register for major examinations and comprehensive examinations for M.S. in Ed. and Ed.D. given on Jan. 5 and Jan. 12.

Dec. 19, Wednesday.....Christmas Recess begins at close of classes.

1952

Jan. 3, Thursday.....Christmas Recess ends at 8:00 A. M.

Jan. 5, Saturday.....Major Examinations, M.S. in Ed. and Ed.D.

Jan. 8, Tuesday.....Final date for report of acceptance of Ed.D. studies for February candidates.

Jan. 12, Saturday.....Comprehensive Examinations in Education, M.S. and Ed.D.

Jan. 28-Feb. 9, Monday-Saturday.....Mid-year Examinations.

Feb. 16, Saturday.....Convocation.

SPRING TERM

Feb. 6-13, Wednesday-Wednesday..... Registration of part-time and graduate students, 9 A. M. to 7 P. M. except Sat.; Sat. to 2 P. M.

Feb. 7, Thursday.....Registration of new full-time students.

Feb. 1, Friday.....Final date for deposit of approved copies of Ed.D. studies and reports on final oral examinations for February candidates.

Feb. 11, Monday.....Classes begin.

Feb. 18-23, Monday-Saturday.....Re-examinations in Fall Term Subjects.

Apr. 5, Saturday.....Easter and Spring Recesses begin at close of classes.

Apr. 15, Tuesday.....Easter and Spring Recesses end at 8:00 A. M.

Apr. 10, Thursday.....Final date for submission of completed Ed.D. studies to Candidates' Committees for June candidates.

Apr. 21-25,
Monday-Friday.....Schoolmen's Week.

Apr. 19, Saturday.....Last day to register for major examinations and comprehensive examinations for M.S. in Ed. and Ed.D. given May 10 and May 17.

May 5-10,
Monday-Saturday.....Enrollment of full-time students for Fall Term and Summer Session.

May 10, Saturday.....Major Examinations, M.S. in Ed. and Ed.D.

May 10, Saturday.....Final date for report of acceptance of Ed.D. studies for June candidates by Candidates' Committees.

May 17, Saturday.....Comprehensive Examination, M.S. in Ed. and Ed.D.

May 23, Friday.....Hey Day.

June 2-14,
Monday-Saturday.....Final Examinations.

June 3, Tuesday.....Final date for deposit of approved copies of Ed.D. reports and reports on final oral examinations for June candidates.

June 18, Wednesday.....Commencement.

CONTENTS

PAGE

Calendar 2
Officers and Faculty 7
General Information 13
- Location, Purpose 13
- Organization 13
- Degrees 13
- Honorary and Professional Societies 13
- Scholarships and Prizes 13
- Student Health Service 14
- Libraries 15
- University Placement Service 16
- Reserve Officers' Training Programs 17
- Fees, Deposits and Financial Obligations 19
- Student Residence 25

The Admission Procedure 28
- Status and Classification of Students 32
- Cultural Olympics 32
- Reading Clinic 33
- Educational Service Bureau 33
- Illman-Carter Unit 34
- Demonstration School 34
- Vocational Teacher Education 35
- Requirements for Degrees 36

Five Year Program 37
- Admission 37
- Requirements for the Degree of Bachelor of Science in Education 37
- Curricula 40
  - For Kindergarten-Elementary School Teachers 40, 41
  - For Secondary Teachers of Academic Subjects 42, 43
  - For Teachers and Supervisors of Art 49
  - For Business Teachers 50, 51
  - For Teachers of Health and Physical Education and Recreation 52
  - For Teachers of Social Studies for Latin-American Countries 53
  - For Teachers and Supervisors of Music 54
  - For Teachers of Mentally Retarded Children 55
  - For Teachers of Corrective Speech 56
  - For School Dental Hygienists 57
  - For Workers with the Blind 58
  - For Vocational Teachers 59

Graduate Division 61
- Admission 61
- The Degree of Master of Science in Education 61

PAGE

Fields of Specialization 61
The Degree of Doctor of Education 73
Subjects of Instruction 77
Accounting 77
Art 77
Botany 80
Business Law 80
Chemistry 80
Economics 80
Education 80
English 101
Finance 101
French 101
Geography 102
German 103
Health and Physical Education and Recreation 103
History 111
Home Economics 111
Italian 114
Latin 114
Marketing 114
Mathematics 114
Mechanical Engineering 115
Music 115
Physical Education 117, 118
Physics 118
Political Science 118
Portuguese 119
Psychology 119
Russian 122
Shorthand, Typewriting and Clerical Practice 122
Social Studies 123
Social Work 123
Sociology 123
Spanish 124
Zoölogy 124

TRUSTEES AND ADMINISTRATIVE OFFICERS OF THE SCHOOL OF EDUCATION

TRUSTEES

The Corporation, composed of the Governor of Pennsylvania and forty Trustees, functions in part through Constituent Boards, consisting of Trustees and others elected by them to Associate Membership. The Constituent Board of Teacher Training is formed as follows:

Trustees: SAMUEL F. HOUSTON, Chairman; ROBERT DECHERT, MERLE M. ODGERS; *Associate Trustee:* WALTER B. SAUL; *ExOfficio:* The Chairman of the Trustees, the President, the Chairman, the Provost, the Vice-Provost. Secretary: DONALD K. ANGELL.

ADMINISTRATIVE OFFICERS

Chairman—GEORGE W. MCCLELLAND, A.B., A.M., Ph.D., D.H.L., L.H.D., LL.D.

President—HAROLD E. STASSEN, B.A., LL.B., L.H.D., LL.D.

Provost—PAUL H. MUSSER, A.B., Ph.D., LL.D.

Executive Vice-President—WILLIAM D. DUBARRY, B.S. in Econ., LL.D.

Vice-President in Charge of Medical Affairs—ROBIN C. BUERKI, B.S., M.D.

Vice-President and Secretary—DONALD K. ANGELL, B.S. in Econ.

Financial Vice-President—HENRY R. PEMBERTON.

Vice-President in Charge of Development—KURT PEISER, B.A., M.A., L.H.D.

Vice-Provost—JOHN M. FOGG, JR., B.S., Ph.D., Sc.D.

Dean of Admissions—GENE D. GISBURNE, B.S. in Ed.

Dean of Student Affairs—ARNOLD K. HENRY, B.S. in Econ., A.M., Ph.D.

Dean of Women—ALTHEA K. HOTTEL, A.M., Ph.D., Litt.D., LL.D.

SCHOOL OF EDUCATION

Dean—E. Duncan Grizzell, A.M., Ph.D.
100 Eisenlohr Hall.

Vice-Dean, Five Year Program—Thomas E. McMullin, A.M., Ph.D.
102 Eisenlohr Hall.

Vice-Dean, Graduate Division—R. D. Matthews, A.M., Ph.D.
203 Eisenlohr Hall.

Administrative Assistant to the Dean—Ruth Cotton, B.S. in Ed.
103 Eisenlohr Hall.

Personnel Officer, Five Year Program—Bessie B. Collins, M.S. in Ed.
102 Eisenlohr Hall.

Chief Clerk—Mildred Brill.
3812 Walnut Street.

Secretary to the Dean—Marion F. Pond.

Director of Vocational Teacher Education—Walter B. Jones, M.A., Ph.D.
3810 Walnut Street.

Director of Illman-Carter Unit for Kindergarten-Elementary Teachers—Laura Hooper, Ph.D.
3944 Walnut Street.

Assistant Director of Illman-Carter Unit—George E. Raab, M.S. in Ed., Ed.D.
3935 Locust Street.

Administrative Assistant to the Director of Illman-Carter Unit—H. Mildred Matlack.
3944 Walnut Street.

Secretary, Illman-Carter Unit—Agnes Quimby.
3944 Walnut Street.

Director of the Cultural Olympics—Frederick C. Gruber. Ph.D.
3810 Walnut Street.

Director of the Reading Clinic—Ralph C. Preston, Ph.D.
3810 Walnut Street.

Director of the Service Bureau—William E. Arnold, Ph.D.
3812 Walnut Street.

Associate Director of the Service Bureau—William B. Castetter, Ph.D.

OFFICERS OF INSTRUCTION

HARRY A. ALSENTZER, JR., Ph.D., *Associate Professor of Chemistry.*
MARY B. ANGELLO, M.S., *Instructor in Demonstration School.*
WILLIAM E. ARNOLD, A.M., Ph.D., *Professor of Education.*
WILLIAM C. ASH, A.M., *Professor Emeritus of Vocational Education.*
MAXINE D. AUERBACH, B.S., *Instructor in Demonstration School.*
FRANK P. BAKES, Ph.D., *Assistant Professor of Psychology.*
HAROLD L. BERRIDGE, M.S., Ed.D., *Assistant Professor of Physical Education.*
HELEN BERTOLETTE, B.F.A. in Ed., *Instructor in Education.*
ARTHUR C. BINING, A.M., Ph.D., *Associate Professor of History.*
MATTHEW W. BLACK, A.M., Ph.D., *Professor of English.*
T. E. M. BOLL, M.A., Ph.D., *Associate Professor of English.*
GEORGE BOND, M.S. in Ed., Ed.D., *Assistant Instructor in Education.*
JACK BOOKBINDER, M.F.A., *Lecturer on Education.*
ROBERT A. BROTEMARKLE, Ph.D., *Director of Psychological Laboratory and Clinic and Professor of Psychology.*
CLAYTON E. BUELL, B.S., M.S. in Ed., *Lecturer on Education.*
ELIZABETH R. BURDICK, M.S., *Assistant Professor of Physical Education.*
ELMER M. BURNS, B.A., (Col. USA), *Professor of Military Science and Tactics.*
JOSEPH CADBURY, A.B., M.A., *Lecturer on Education.*
PERRY A. CARIS, A.M., Ph.D., *Associate Professor of Mathematics.*
WILLIAM B. CASTETTER, Ph.D., *Lecturer on Education.*
MARY E. COLEMAN, A.M., Ph.D., *Assistant Professor of Education.*
BESSIE B. COLLINS, M.S. in Ed., *Personnel Officer and Assistant Instructor in Education.*
WILLIAM R. CRAWFORD, A.M., Ph.D., *Professor of Sociology.*
H. LAMAR CROSBY, A.M., Ph.D., *Professor of Greek.*
DORIS K. DANNENHIRSCH, B.S. in Ed., M.S. in Ed., *Instructor in Physical Education.*
SERENA F. DAVIS, M.S., *Instructor in Education.*
BESS V. DIETRICK, B.S.P.E., *Instructor in Physical Education.*
J. KENNETH DOHERTY, Ph.D., *Associate Professor of Physical Education.*
PAUL DOMVILLE, B.S. in Arch., *Professor of Freehand Drawing.*
M. ELAINE DUFFY, M.S. in Ed., *Assistant Instructor in Education.*
RALPH W. DUNCAN, A.B., Ph.D., *Professor of Physics.*

William L. Einolf, Ed.M., *Assistant Professor of Education.*
Loren C. Eiseley, A.M., Ph.D., *Professor of Anthropology.*
Annette Emgarth, B.S. in Ed., A.M., *Lecturer on Education.*
R. Hildegarde J. Farquhar, A.M., *Associate Professor of Physical Education for Women.*
Hyacinthe U. Forest, Ph.D., *Assistant Professor of Romance Languages.*
Lee O. Garber, Ph.D., *Associate Professor of Education.*
Francis M. Garver, A.M., Ph.D., *Professor Emeritus of Elementary Education.*
John A. Glascott, B.S., M.S. in Ed., *Instructor in Physical Education.*
Doris E. Goodfriend, B.S. in Ed., *Instructor in Demonstration School.*
Otis H. Green, A.M., Ph.D., *Professor of Romance Languages.*
E. Duncan Grizzell, A.M., Ph.D., *Professor of Secondary Education and Dean of the School of Education.*
Frederick C. Gruber, Ph.D., *Assistant Professor of Education.*
Lee N. Gulick, A.M., M.E., *Professor of Mechanical Engineering and Lecturer on Education.*
Edward K. Hankin, M.S. in Ed., Ed.D., *Assistant Professor of Education.*
Richard W. Hartmann, M.S. in Ed., Ed.D., *Lecturer on Education.*
Edward H. Heffner, A.M., Ph.D., *Professor of Latin.*
Laura Hooper, Ph.D., *Professor of Education and Director of the Illman-Carter Unit.*
Wesley G. Hutchinson, A.M., Ph.D., *Associate Professor of Botany.*
Helen Huus, A.M., Ph.D., *Assistant Professor of Education.*
Adelaide T. Illman, M.A., *Professor Emeritus of Kindergarten-Primary Education.*
Ernst Jockers, A.M., Ph.D., *Professor of German.*
Roland E. Johnston, M.S. in Ed., Ph.D., *Lecturer on Education.*
Arthur J. Jones, Ph.D., *Professor Emeritus of Secondary Education.*
Walter B. Jones, A.M., Ph.D., *Associate Professor of Education and Director of Vocational Teacher Education.*
Paul C. Kitchen, M.A., Ph.D., *Associate Professor of English.*
Lester E. Klimm, Ph.D., *Professor of Geography.*
Ernest O. Kohl, M.S., Ed.D., *Lecturer on Education.*
MacEdward Leach, A.M., Ph.D., *Associate Professor of English.*

HARRY DEW. LEES, M.D., *Associate Professor of Public Health and Preventive Medicine and Director of Student Health Service.*

F. W. LUEHRING, A.M., Ph.D., *Professor of Physical Education.*

THERESA I. LYNCH, R.N., A.M., Ed.D., *Professor of Nursing Education.*

MARGARET S. LYSLE, M.S., *Instructor in Physical Education.*

GEORGE A. MACFARLAND, A.M., *Professor of Accounting.*

WALTER H. MAGILL, A.M., Ph.D., *Professor Emeritus of Education.*

HELEN E. MARTIN, M.A., Ed.D., *Assistant Professor of Education.*

RODERIC D. MATTHEWS, A.M., Ph.D., *Professor of Education and Vice-Dean, Graduate Division.*

WALLACE H. MAW, B.A., *Lecturer on Education.*

ARTHUR D. MAXWELL, B.S. in Ec. (C.P.A.), *Assistant Professor of Accounting.*

THOMAS E. MCMULLIN, A.M., Ph.D., *Associate Professor of Education and Vice-Dean, Five Year Program.*

JACK C. MEDICA, A.M., *Instructor in Physical Education.*

D. MONTFORT MELCHIOR, Ph.D., *Lecturer on Education.*

EUGENE L. MERCER, M.D., Sc.D., *Professor of Physical Education, Dean of the Department of Physical Education and Instructor in Orthopedics.*

WILLIAM F. MEREDITH, A.M., Ph.D., *Professor of Physical Education.*

JOYCE MICHELL, Ph.D., *Associate Professor of Music.*

RUTH WEIR MILLER, M.S. in Ed., *Lecturer on Education.*

JOHN H. MINNICK, Ph.D., Litt.D., Sc.D., *Professor Emeritus of Education.*

JAMES A. MULHERN, A.M., Ph.D., *Associate Professor of Education.*

GEORGE A. MUNGER, B.S., *Assistant Professor of Physical Education.*

MILES MURPHY, Ph.D., *Professor of Psychology.*

ROY F. NICHOLS, A.M., Ph.D., *Professor of History.*

ALBERT I. OLIVER, Ed.D., *Assistant Professor of Education.*

CHARLES P. OLIVIER, A.M., Ph.D., *Professor of Astronomy and Director of the Flower Astronomical Observatory.*

CHARLES L. PARMENTER, Ph.D., *Professor of Zoölogy.*

S. HOWARD PATTERSON, A.M., Ph.D., *Professor of Economics.*

JEWELL C. PHILLIPS, A.M., Ph.D., *Assistant Professor of Political Science.*

EMIL K. PREISS, *Instructor in Physical Education.*

Ralph C. Preston, A.M., Ph.D., *Associate Professor of Education.*
Mabel Lee Price, M.S., *Lecturer on Education.*
George E. Raab, M.S., Ed.D., *Associate in Education and Principal, Children's School.*
Wendell P. Raine, M.A., LL.M., *Professor of Business Law.*
Alice M. Russell, Ph.D., *Instructor in Education.*
Charles R. Scott, M.S., *Assistant Professor of Physical Education.*
Jesse L. Scott, A.M., Ph.D., *Assistant Professor of Education.*
George O. Seiver, Ph.D., *Professor of Romance Languages.*
Alfred Senn, Ph.D., *Professor of Germanic Philology.*
Hugh M. Shafer, Ph.D., *Associate Professor of Education.*
J. Kenneth Shotts, M.S. in Ed., *Instructor in Demonstration School.*
Stanley P. Shugert, Ph.D., *Professor of Mathematics.*
Samuel B. Sneath, M.S. in Ed., *Assistant Instructor in Education.*
Walter Steckbeck, A.M., Ph.D., *Associate Professor of Botany.*
Harold R. Stevens, B.S., LL.D. (Capt., U.S.N.), *Professor of Naval Science.*
Chester G. Stocker, A.M., Ph.D., *Assistant Professor of Education and Director of Supervised Student Teaching.*
Paul J. Storm, M.S., Ph.D., *Assistant Professor of Geology and Mineralogy.*
Malvena F. Taiz, A.B., *Instructor in Physical Education.*
Merle W. Tate, A.M., Ed.M., Ed.D., *Associate Professor of Education.*
Frances M. Taylor, M.S. in Ed., *Instructor in Demonstration School.*
Alice K. Watson, A.M., *Instructor in Education and in Demonstration School.*
Arthur P. Watts, M.A., D.-ès-L., *Assistant Professor of European History.*
Doris Keefer Welsh, B.S., *Instructor in Physical Education.*
Edwin B. Williams, A.M., Ph.D., *Professor of Romance Languages and Dean of the Graduate School of Arts and Sciences.*
Harvey L. Wilson, diploma of Curtis Institute, M.S. in Ed., *Lecturer on Education.*
Clifford H. Wood, M.S., *Instructor in Physical Education.*
Thomas Woody, A.M., Ph.D., *Professor of Education.*
Anna L. Worrell, A.M., *Instructor in Education and in Demonstration School.*

GENERAL INFORMATION

LOCATION

The office of the School of Education is Room 100, Eisenlohr Hall, 3812 Walnut Street.

PURPOSE

The School of Education has for its purpose the preparation of personnel for the field of education including nursing education. Only those preparing for some phase of educational work should apply for admission.

ORGANIZATION

The School of Education has four divisions, the Five Year Program for the preparation of Teachers of academic and special subjects, the Graduate Division, and the Illman-Carter Unit for Kindergarten and Elementary Teachers also five years in length.

DEGREES

The School of Education offers programs leading to the degrees of Bachelor of Science in Education, Master of Science in Education, and Doctor of Education. For details concerning these degrees consult the section of this bulletin relating to the respective division of the school.

HONORARY AND PROFESSIONAL SOCIETIES

Bowling Green, a local honorary dramatic society for women.
Eta Sigma Phi, a national classics fraternity for men and women.
Kappa Phi Kappa, a national professional education fraternity for men.
Mortar Board, a national Senior honorary society for women.
Phi Delta Kappa, national honorary education fraternity for men.
Pi Gamma Mu, a national honorary society in the social sciences.
Pi Lambda Theta, a national honorary education society for women.
Pi Mu Epsilon, a national mathematics fraternity for men and women.
Sphinx and Key, a local junior honorary society for women.
Theta Alpha Phi, a national dramatic fraternity for men and women.

SCHOLARSHIPS AND PRIZES

Scholarships open to undergraduates may be divided into the following groups:

1. *Endowed Scholarships,* carrying free tuition, either entire, half, or in

the amount of the income from invested funds. Certain of these scholarships have been set aside for Freshmen not eligible for the City or Mayor's Scholarships and are awarded on the basis of competitive scholarship tests given by the College Entrance Examination Board in a number of cities throughout the country on a Saturday near the middle of March. These tests are of the "objective type" and do not permit special preparation. Applications for Freshmen Scholarships should be filed with the Committee on Scholarships, Room 111, College Hall, University of Pennsylvania, not later than the first of February.

2. *City and Mayor's Scholarships,* carrying free tuition. The city scholarships are awarded by the Philadelphia Board of Public Education. The Philadelphia Mayor's Scholarships are awarded on the basis of the March competitive scholarship tests given by the College Entrance Examination Board. Inquiries concerning the Mayor's awards should be addressed to the Mayor of Philadelphia, City Hall.

3. *Repayment Scholarships.* A number of these scholarships are assigned annually to upperclass students. The recipient is permitted to continue the work for his degree after signing a written contract that he will repay to the University, at stipulated intervals after graduation, the amount that has been advanced for tuition. Inquiries should be addressed to the Committee on Scholarships, 111 College Hall, University of Pennsylvania, on or before June 1 preceding the opening of the academic year in which scholarship aid is desired.

4. *Senatorial Scholarships,* carrying free tuition. Nominations are made by members of the State Senate of Pennsylvania subject to the scholarship eligibility requirements of the University.

The Committee on Scholarships reserves the right to terminate the scholarship of any student whose scholastic record or conduct is regarded as unsatisfactory. In no case will a scholarship be renewed if the student's scholastic record at the beginning of the college year is not clear of conditions, failures, or courses incompleted.

For a list of prizes, see University Catalogue.

STUDENT HEALTH SERVICE

The University provides adequate facilities for the health care of students. A staff of nurses and physicians, including specialists in the various fields of medicine, is maintained by the Health Service for the study and treatment of student illness.

All students matriculating for the first time are required to have a complete physical examination. Physical defects discovered at this examination

will be given careful study, and every attempt will be made to assist the student in their correction.

Dispensary Service.—Physicians are in attendance and available for consultation with students concerning all health problems from 8:30 A.M. to 11:45 A.M. and from 1:00 P.M. to 5:00 P.M.; Saturdays 8:30 A.M. to 1:00 P.M. Emergency cases are cared for at any hour of the day or night. A staff physician will visit a student who may be confined to his or her room because of acute illness, if the student is a resident.

The facilities of the special clinics conducted by the Health Service are available to students without charge. These include: Internal Medicine, Surgery, diseases of the Heart, diseases of the Lungs, Eye, Ear-Nose-Throat, Skin, Mental Hygiene, etc. Routine laboratory examinations are made without charge. X-ray studies are charged for on a cost basis.

The Health Service does not provide for such procedures as elective surgery of any kind, surgical operations, refractions or dental services. The department cannot accept responsibility for the care of chronic conditions with which the student may enter the University if such condition requires continuous and prolonged supervision and treatment.

Infirmary and Hospital Care.—For the treatment of conditions requiring bed rest, students may be admitted to the student infirmary or to the University Hospital. Graduate nurses are on twenty-four hour duty in the infirmary. No charge is made for medical or nursing services, or for room and meals in the infirmary for a period of three days. A charge of $4.50 per day is made after the three-day period. Hospitalization in the Student Ward of the University Hospital is charged for at the rate of $9.00 per day.

The University is desirous that students make free use of the facilities thus provided as a measure for reducing to a minimum the unnecessary loss of time from classes as well as safeguarding the health of the individual student.

THE LIBRARIES

The University Libraries have a total of more than 1,194,000 volumes. Over 700,000 are housed in the Main Library Building and the remainder in other special and departmental libraries. Included are books purchased as early as 1750, and gifts from Louis XVI, Benjamin Franklin and other 18th century benefactors. This great collection of books offers unique opportunities for research in many fields.

The Maria Hosmer Penniman Memorial Library of Education consists of about 57,000 volumes in its special field. Conveniently located in Bennett Hall, this library provides for the normal needs of both graduate and undergraduate students of education, and is supplemented by the Main Library. A liberal purchase program keeps the Penniman Library up-to-date

with current publications. Students are assisted in the use of the collection by librarians with special background in the field of education.

The Illman-Carter Unit Library of nearly 5000 volumes serves as a reference collection for students in elementary education and includes the best in children's literature as well as elementary texts. The Children's Room is open to children enrolled in the school. There is also a large circulating picture collection.

The Main Library houses much of the older, historic educational material. It serves the whole University in lending books and in giving bibliographic and reference assistance as needed. At all hours when the library is open, at least one professional librarian is on duty to assist in the use of the card catalogue, to advise on sources of information, and to guide students in the use of bibliographies, indexes, and similar tools of scholarship.

THE UNIVERSITY PLACEMENT SERVICE

MARETTE QUICK, in Charge of Teacher Placement

Students completing the curriculum of any of the divisions of the School of Education who wish to secure teaching appointments in public or private schools, or in colleges, are invited to file their applications with the University Placement Service. Blanks for this purpose may be secured in Room 6, second floor, 3400 Walnut Street. Candidates for teaching appointments are advised to file their applications early in the year and well in advance of the placing season beginning in the early spring. Interviews with candidates are held every Tuesday and Thursday afternoon from two to five o'clock and on Saturday mornings from ten to one o'clock.

Graduate students who now hold administrative positions in schools or colleges and who wish to consider applicants for vacancies on their faculties may report their requirements to the University Placement Service. Full credentials are on file for examination by employing administrators, and a conference room is available for interviews with selected candidates. (Telephone EVergreen 6-0100, Extension 937.)

The services of the Student Aid Department of the University Placement Service are available to students in the School of Education who seek opportunities for part-time employment. In addition to other types of part-time work, this department also supervises the student agencies. No student should enter the School of Education without a clear understanding of the financial obligations of the course. Those students who are interested should apply at the office of the Student Aid Department, Room 1, 3400 Walnut Street.

RESERVE OFFICERS' TRAINING PROGRAMS

Naval Reserve Officers' Training Corps

The Department of Naval Science at the University of Pennsylvania directs the Naval Reserve Officers' Training Corps program prescribed by the Department of Defense which leads to a commission in the United States Navy or the United States Marine Corps. Courses are offered to qualified male students who meet the Navy physical requirements and who can complete the curriculum before reaching their twenty-fifth birthdays.

The Naval student may elect to study in any school of the University and will pursue the curriculum of the school of his choice substituting naval science courses for the elective courses offered by his school. He is required to wear the uniform only during laboratory periods and, except for the ordinary rules of gentlemanly conduct, is subject to naval discipline only at those times.

The program requires three hours of lecture and two hours of laboratory per week. Between the Junior and Senior years students make a three weeks' training cruise. Uniforms, text books and equipment required for the courses are supplied by the Navy. During the Junior and Senior years students receive a subsistence allowance which varies in amount from year to year and is currently $.90 per day. During the summer cruise the full pay of a seaman apprentice is received.

Members of the NROTC are deferred from induction under the Selective Service Act. Reserve Officers may be called to active duty only at their own request except during National emergency.

The Navy annually offers a large number of scholarships which provide tuition, fees, text books and equipment plus a retainer fee of $600.00 per year for four years. University undergraduates are eligible to compete for these scholarships. Recipients of scholarships make three summer cruises of six to eight weeks each and obligate themselves to serve up to a maximum of two years' active duty as officers in the United States Navy or United States Marine Corps.

Additional information may be obtained by communicating with Professor of Naval Science, Stephen Decatur Hall, 3216 Walnut Street, Philadelphia 4, Pennsylvania.

CURRICULUM

NS-101 and 102—Naval Orientation: Two terms, 3 hours, 6 s. c. Navy regulations, customs and traditions, organization of the naval establishment and the functions of its various elements; United States Naval History and elementary seamanship.

NS-201 and 202—Naval Weapons: Two terms, 3 hours, 6 s. c. The fun-

damental principles of naval weapons and their components, typical fire control systems, applied electronic equipment, including air-borne.

NS-301 and 302—Navigation: Two terms, 3 hours, 6 s. c. The theory and techniques of surface and aerial navigation. Includes dead reckoning, piloting and celestial navigation.

NS-401—Naval Machinery: One term, 3 hours, 3 s. c. Naval engineering installations including main propulsion steam plants and Diesel engines, with a brief discussion of aircraft engines.

NS-402—Ship Stability, Naval Justice and Leadership: One term, 3 hours, 3 s. c. The basic principles of warship stability. Procedures and responsibilities in the administration of naval justice. Elements of the psychology of leadership.

**NS-302M—History of the Art of War:* One term, 3 hours, 3 s. c. Introduction to the art of war. The causes and effects of war. The development of tactics and material is shown by discussion of specified battles in European history.

**NS-401M—United States Military History and Policy:* One term, 3 hours, 3 s. c. The development of United States Military Policy. The tactics of United States forces in selected battles.

**NS-402M—Amphibious Warfare:* One term, 3 hours, 3 s. c. A brief history of amphibious warfare and its development. The principles of amphibious warfare techniques. The application of these principles in selected examples from modern history.

**Note:* NS-302M, 401M, and 402M are the last three semesters' work for applicants for Marine Corps commissions.

Army Reserve Officers' Training Corps Units

The primary purpose of the Army ROTC is to produce commissioned officers for the Organized Reserve Corps. In addition, a selected number will be offered commissions in the Regular Army.

The course in Military Science and Tactics is open to all physically qualified male students under 23 years who are citizens of the United States. Certain veterans may be accepted up to age 27. The required examination may be arranged with the Department of Military Science and Tactics.

During the four year course 16 s. c. in Military Science and Tactics may be accumulated. The program is divided into the Basic Course of two years, corresponding to the freshman and sophomore years in the University, and the Advanced Course of two years, corresponding to the junior and senior years. The Basic Course involves three hours of instruction per week and gives 4 s. c. during the two years. The Advanced Course requires five hours a week and carries 12 s. c. for the two years.

The ROTC maintains units in the Infantry, Quartermaster Corps and Transportation Corps. Special arrangements may be made to receive a commission in the Corps of Engineers, Signal Corps, Chemical Corps and Ordnance Corps.

ROTC students, provided they are able to pass the physical fitness test given by the Department of Physical Education, may elect to substitute military training for the required course in physical education.

Students who have had previous honorable active military service in the Army, Navy, Air Force, Marine Corps, or Coast Guard for a period of six months or more may be granted credit for part or all of the Basic Course, ROTC at the discretion of the Professor of Military Science and Tactics.

Attendance at summer camp is required between the first and second year of the Advanced Course. This camp is actually a concentrated laboratory course in military science and tactics. While attending camp, cadets are paid at the rate of $75 per month plus all expenses.

All members of the ROTC are furnished uniforms and necessary equipment pertaining to training. Cadets enrolled in the Advanced Course, Senior Division, are paid a monthly allowance at the current rate of 90¢ per day. In addition, they are furnished one officer's uniform which they retain on graduation.

Under certain conditions members of the Army ROTC may be deferred from call to active duty under provisions of the Selective Service Act of 1948 as amended by the Selective Service Extension Act of 1950.

Further and more complete details concerning Army ROTC may be obtained from the Department of Military Science and Tactics, Wayne Hall, 3430 Chestnut Street, Philadelphia 4, Pennsylvania.

FEES, DEPOSITS AND FINANCIAL OBLIGATIONS

Regulations Governing Payments

The Trustees of the University of Pennsylvania reserve the right at any time to amend or add to the regulations of the University, including those concerning fees and method of payment, and to make such changes applicable to students at present in the University, as well as to new students.

All payments of fees should be made at the Cashier's Office, 3320 Walnut Street. Office hours: 9.00 A. M. to 4.00 P. M. Saturdays, 9.00 A. M. to 12 M.

Payments due the University must be made in cash, or by cheque, bank draft, or postal money order, drawn to the order of the Trustees of the University of Pennsylvania for the exact amount due.

Special Fees

Matriculation Fee: A fee of $5.00 shall be charged all new students entering the University.

Late Registration Fee: A student in the School of Education is required to register before the beginning of each term within the various periods to be announced from time to time by the respective Deans. A student who fails to register or to complete registration (except for paying the term bills) within such a designated period, may register or complete registration at a later date with the approval of the respective Dean and upon the payment of a fee of $5.00.

Late Payment Fee: A late payment fee of $5.00 shall be charged a student in any School or Department of the University who fails to pay his tuition fees or other charges on or before the seventh day following the opening of each term.

Fee for Transcript of Record: Upon request one certified transcript of a student's record will be issued without charge, but for each additional transcript, a charge of $1.00 will be made.

General Fees and Charges

Doctor of Education Report Fee: This fee of $100.00 is charged of students who receive the degree of Doctor of Education and is used to cover the expense of binding and cataloguing the study, the cost of printing at least 150 copies of an abstract of the study, and to meet the expense of supervising the field work of the student which frequently entails traveling expenses on the part of the supervisor.

Deposits: Every student shall, upon entering the University, make a deposit of an amount required in the course in which he registers, (ranging from $5.00 to $25.00) to cover loss, damage, or breakage of University property, library fines, laboratory material, or any charge not paid by the student in some other way. A student whose deposit is reduced by charges against it to one-half the original amount or less shall be required to pay a sum sufficient to restore the deposit to the original amount. No deposit or balance remaining on a deposit shall be finally repaid to a student until he shall have been graduated, or shall have formally withdrawn from the University and shall have settled his liabilities of every kind, whether matured or unmatured, due and owing to the University.

Summary of General Fees and Charges:

Tuition Fee:

Full-time Undergraduates, per year	$600.00
Full-time Graduate Students, maximum, two consecutive terms	600.00

Part-time Undergraduate Students, per semester credit	22.00
Part-time Graduate Students, per semester credit	25.00

TUITION FEE: For Undergraduate students the tuition fee is payable in two equal installments. The first payment shall be made prior to the beginning of classes for the first term of the Department in which the student may be enrolled, and the second payment shall be made prior to the beginning of classes for the second term of the Department in which the student may be enrolled, except in the School of Medicine when the second payment becomes due on February 1st. For Graduate students the tuition fee, payable at the beginning of each term, is $25.00 per semester credit with a maximum tuition charge of $600.00 for two successive terms. The first term the student is charged according to the number of credits he is carrying for that term. The second term a full-time Graduate student pays the difference between the tuition charged for the Fall term and the maximum of $600.00.

THE GENERAL FEE: A General Fee of $25.00 for the academic year is charged to each full-time student in the Undergraduate Schools and in the Department of Oral Hygiene in the School of Dentistry. In the Graduate Schools, with the exception of the Graduate School of Medicine, a General Fee of $20.00 for the academic year is charged to each full-time student. In the Law School, School of Medicine, School of Veterinary Medicine, and the School of Dentistry, excepting in the Department of Oral Hygiene, a General Fee of $15.00 is charged. This fee is for the Student Health Service and other University services not covered by the Tuition Fee. From the revenue thus derived from the Undergraduate Schools appropriations are made to the necessary expenses of the Undergraduate Council, the Women's Student Government Association, and other general student activities that are not self-sustaining, such as the Band, Choral Society, Debate Council, Dramatics and Student Publications. The General Fee is paid in two equal installments at the time the Tuition Fee is due.

Part-time students who become candidates for degrees are charged the General Fee for the year in which they are to graduate, the fee being payable on the presentation of the bill.

GENERAL FEE.—Full-time Undergraduates, per year	$25.00
—Full-time Graduates[1], per year	20.00
DOCTOR OF EDUCATION REPORT FEE.—Required of those receiving the degree	$100.00
DEPOSIT:	
Undergraduates	15.00
Graduate Students	5.00

[1] Twelve semester credits per term are considered a full-time program for a graduate student.

(Note.—No tuition charge will be made for any course given especially for fully approved part-time students in Vocational Teacher Education; however, a term registration fee of $5.00 for each such course will be required. All other courses will be at the regular tuition rate of $22.00 per semester credit for undergraduates and $25.00 per semester credit for graduates.)

Special Rules

Failure to Pay. If a student fails to pay his fees and other charges in accordance with the regulations, his name is dropped from the University rolls and he is excluded from lectures, recitations, practical work, examinations and occupancy of dormitory quarters until payment is made. The student will be held accountable for all absences incurred through the operation of this rule. For continued delinquency the student will be permanently dropped from the University. The enforcement of this penalty shall not relieve the student of the obligation to pay the term's fees and charges.

Liability of Matriculates. A student to whom a certificate of admission to any School of the University is issued, and who has filed a surety bond guaranteeing the payment of all obligations incurred by him, is in effect a matriculate. Therefore, any student, who, after receiving his certificate of admission, proposes to sever his contractual relationship and not complete registration, must give formal notice in writing to this effect to the Dean of Admissions for the Undergraduate Schools, or to the Dean of the respective professional school, at least two weeks prior to the formal opening date of the school for the term next succeeding. For failure to give such notice the student is liable under the terms of his bond for the payment of fees in full for said term. A request for a transcript of record is not considered as a notice of withdrawal.

Notice of Withdrawal. If the student registers, and subsequently desires to sever his contractual relationship at the conclusion of said term, he is required to give a formal notice in writing of intended withdrawal to the Dean of the School at least two weeks prior to the formal opening date of the school for the term next succeeding. For failure to give such notice the student is liable under the terms of his bond for the payment of fees in full for that term. A request for a transcript of record is not considered as a notice of withdrawal.

Return of Fees on Account of Illness, etc. A student who withdraws on account of illness or other physical disability shall be given a return of an amount which shall be such proportionate part of the term's fees as the number of weeks in which he is not attendance bears to the number of weeks in the academic session, provided such proportionate part be not more

than one-half of the term's fees. Formal notice of withdrawal, together with the doctor's certificate, must be filed with the Dean.

Leave of Absence. The Dean of any faculty may, for good cause, grant a leave of absence to a student in good scholastic and financial standing. No fees will be returned in such cases, but an allowance will be made upon the fees when the student re-enters the course, proportionate to the unexpired period of the session in which leave of absence was granted.

Allowance on Reinstatement. A student who is requested to withdraw from any department of the University because of violations of the disciplinary requirements, or because of failure to maintain a satisfactory scholastic standard, shall receive no refund of tuition fees by reason of such withdrawal, but if reinstated, shall receive credit to an amount which shall be such proportionate part of the term's fees as the number of weeks in which he is not in attendance bears to the number of weeks in the academic session.

Fee for Additional Year. A student who does not complete the work for a degree or a certificate within the time indicated for the course shall in any succeeding year or years pay, on a pro rata basis, for all courses taken, with a minimum charge, however, of the prevailing rate per semester credit, provided that in no term shall the fees so paid exceed the regular term fee.

Maximum Tuition Rate for Partial Students. A part-time or partial student will be charged at the prevailing rate per semester credit, provided that the total charges do not exceed the established rate for a full-time student.

Late Registration and Absence. Neither late registration nor absence during the term shall entitle the student to a reduction in fees.

Right to Withdraw or Graduate. No student shall be granted a certificate of withdrawal or be graduated who has not paid in full all his financial obligations to the University.

ESTIMATED EXPENSES FOR A COLLEGE YEAR OF 38 WEEKS FOR ALL UNDERGRADUATE STUDENTS

The matriculation fee ($5.00) and the deposit (ranging from $5.00 to $50.00 depending upon the department entered) are payable only at the time of the original registration, and are therefore not included in the following estimates.

	Estimated Average Expenditure	Estimated Minimum Expenditure
Tuition	$600.00	$600.00
General Fee	25.00	25.00
Books	50.00	30.00
TOTAL	$675.00	$655.00
Lodging	240.00	165.00
Board	550.00	450.00
GRAND TOTAL	$1,465.00	$1,270.00

To the above total there must be added clothing, laundry, and other personal services, together with the cost of transportation, seasonal or daily.

STUDENT RESIDENCE

Student Residence Regulations

For Undergraduate Men in the School of Education

1. Apartment houses and hotels are not approved for residence for any undergraduate students of the University.

2. All regular male matriculates are eligible to reside in the University dormitories.

3. All Freshmen not residing at home or with near relatives are required to live in the Freshman dormitories, unless excused from so doing by the Dean of Student Affairs for exceptional and convincing reasons.

4. All Sophomores and Juniors not residing at home or with near relatives are required to live either in the University dormitories or in fraternity houses, unless excused from so doing by the Dean of Student Affairs for exceptional and convincing reasons.

5. Undergraduate students in the Senior class not residing at home or with near relatives are required to live in the dormitories, in fraternity houses, or in approved rooming houses on a restricted list, unless excused from so doing by the Dean of Student Affairs for exceptional and convincing reasons.

6. The University reserves the right to refuse permission to students to live in any house not approved by the University Committee on Student Residence. The Committee will not approve houses offering accommodations to both sexes.

For the protection of students residing in approved boarding houses, such students are expected to sign a lease drawn up by the University of Pennsylvania, and are advised to request receipts for all payments.

Student Residence for Women

All full-time undergraduate women students not residing in their own homes are required to live in the Dormitories for Women. In the event there are insufficient accommodations in the dormitories, requests to live elsewhere must be made in writing by parents or guardian to the Director of Residence for Women and will be granted only in exceptional cases. Such requests must be made and approved two weeks before the beginning of the term in which such arrangements are desired. During the sophomore, junior, and senior years, students may reside in the women's fraternity houses, with the approval of the Director of Residence for Women. Seniors

may live in other registered houses of the University upon application to and approval of the Director of Residence for Women.

Apartment houses and hotels are not approved for residence for any undergraduate students of the University. Students may not change residences without prior approval by the Director of Residence for Women.

The housing facilities for full-time, undergraduate students include Sergeant Hall, Yeatman House, the thirteen women's fraternity houses. Members on the staff of the Dean of Women reside in each housing unit. Sergeant Hall provides accommodations for undergraduate students in the College of Liberal Arts for Women, the School of Education, and the School of Fine Arts. Room charges range in price from $155 to $350 for two terms with a few more expensive rooms having private baths. Sergeant Hall residents are required to pay for and to take breakfasts and dinners in Sergeant Hall Dining Room. The board rate for these two meals is $348. Luncheon is optional. Yeatman House is primarily for students in Occupational Therapy. Room and board, including breakfasts and dinners, range in price from $540 to $600 depending on the type of room. For further detailed information apply to the Dean of Student Affairs, 111 College Hall.

Dormitories for Men

For detailed information, apply to the Dean of Student Affairs, Room 111, College Hall.

General Information

The dormitory buildings are a continuous group of thirty-six houses surrounding several grass courts or quadrangles. The main entrance is at Thirty-seventh and Spruce Streets.

Lavoratories and showers are provided in each dormitory.

Each tenant is provided with a washstand with hot and cold running water in the room or lavatory. Many rooms and suites have open fireplaces.

Pay telephones are installed at convenient places in the dormitories.

The Parietal Committee

The Parietal Committee supervises the general activities of dormitory life. This committee serves in a counselling and advisory capacity for residents, and is responsible for their order and behavior.

The members are University administrative and faculty personnel residing in the dormitories, each personally supervising several specific dormitory houses.

Office of the Dean of Women

The activities and welfare of women students outside the classroom are under the guidance of the Dean of Women and a staff of specialized assistants who meet each student personally in order that they may know her informally as well as to understand her problems and interests. They assist her to apply her academic specialization through participating in related student and community activities, and are available for consultation on problems referring to finances, health, recreation, residence arrangements or other personal matters.

In the interest of each student, this office consults administrative and faculty members, other personnel and dormitory officers, physicians in the Student Health Service, and leaders of undergraduate activities, as situations arise.

The University women's dormitory facilities and all of the women's fraternity houses are supervised by this office. Staff members of the department of the Dean of Women are in residence at the dormitories for women, and official directors reside in each of the women's fraternity houses.

The office of the Dean of Women is located in Bennett Hall, 34th and Walnut Street.

Personnel Office

The School of Education is interested in the personal, academic and professional development of each student. To assist in developing student interests and abilities, the Personnel staff endeavors to have contact with each student through individual interviews and group meetings. In addition, the Personnel staff maintains contact with other University student services, thereby offering a central source of information for all students concerning opportunities for help with problems and activities for personal development.

The Personnel office is in Eisenlohr Hall, 3812 Walnut Street.

THE ADMISSION PROCEDURE

Undergraduate Divisions[1]

ADMISSION PERIODS

New students are accepted for the Fall Term, beginning in September. In February a limited number of students are admitted to the Freshman class. It is necessary for a candidate to file his formal application well in advance of the expected date of admission. The proper form may be obtained from the Office of Admissions, 3435 Spruce Street, Philadelphia. Unless an application is received at least six months prior to the expected date of admission, the candidate may not receive full instructions concerning entrance tests.

SUBJECTS REQUIRED FOR ADMISSION

In order to become eligible for consideration, the candidate must have completed a preparatory course which includes fifteen units of entrance credit in acceptable subjects. The entrance unit is briefly defined as a standard year's work in a subject.

Of the fifteen units, at least eleven and one-half units should be in standard preparatory subjects such as English, History, Foreign Language, Mathematics and Science. The remaining three and one-half units may be in properly organized subjects such as Drawing, Manual Training, Bookkeeping, Stenography and Commercial Law. Entrance credit, however, is not allowed in subjects such as Typing, Penmanship and Physical Education.

The eleven and one-half units should include the following specific subjects:

English (four years)	3 units
History	1 unit
A Foreign Language	2 units
Algebra	1 unit
Plane Geometry	1 unit

METHODS OF QUALIFYING FOR ADMISSION

There are two methods by which a candidate may become eligible for selection as a member of the Freshman class:

1. *By Certificate and Entrance Tests.* A graduate of an accredited secondary school whose course has included the required subjects and who

[1] For admission to the Graduate Division see pages 61, 63.

is fully recommended by his principal or headmaster with reference to personality and physical fitness as well as scholastic ability must earn acceptable ratings on entrance tests.

A candidate who earns a certificate and diploma of graduation from a secondary school which is not listed as an accredited school by the regional association in the area (such as the Middle States Association of Colleges and Secondary Schools) may qualify by this method but the Committee on Admissions reserves the right to require additional examinations.

2. *By Examination Only.* In exceptional cases, a candidate who offers satisfactory personal recommendations may qualify for admission by demonstrating his competency to do college work through a series of aptitude and achievement tests. These tests may be taken during two examination periods of the College Entrance Examination Board. This is the only method of admission open to a candidate who has not been graduated from a standard secondary school.

THE ENTRANCE TESTS

The entrance tests are offered by the College Entrance Examination Board in January, March, May, August and December. They include the Scholastic Aptitude Test and the Scholastic Achievement Test. The Scholastic Aptitude Test is an objective type of test for which the candidate receives a practice booklet when he registers for the test. The Scholastic Achievement Test consists of ten sub-tests, of which a candidate may take but three.

The tests are given on one day in a number of centers. Information about examination centers and registration forms may be obtained from the College Entrance Examination Board, Post Office Box 592, Princeton, New Jersey.

In all cases, the Dean of Admissions will notify the candidate concerning the tests which should be taken.

SELECTION OF THE FRESHMAN CLASS

In selecting an entering class, the Committee on Admissions has before it a complete transcript of each candidate's scholastic record; a confidential statement from the principal or headmaster as to the candidate's character, personality and fitness for college work; and ratings on entrance tests. A candidate is required to take both the Scholastic Aptitude Test and the Scholastic Achievement Test of the College Entrance Examination Board. These ratings are used for the selection of candidates and also for their placement in certain courses after admission.

Since the list of candidates for a course usually exceeds the number to be selected for admission, the Committee on Admissions will give preference

to the candidate whose credentials are most generally satisfactory and give greatest promise of success in the course to which the candidate is seeking admission.

PLACEMENT EXAMINATIONS

A candidate accepted for admission to the Freshman class who has earned a sufficiently high rating on the English Composition portion of the Scholastic Achievement Test of the College Entrance Examination Board will be placed in an advanced course in English Composition.

College Entrance Examinations ratings will be used for the placement on foreign language of School of Education students. All School of Education students who wish to enter second and third year courses in French, German or Spanish and who have not taken the College Entrance Examination in that language will be given the opportunity to take Placement Examinations given by the language departments.

PERSONAL INTERVIEW REQUIREMENT[1]

Students meeting the above requirements will be admitted to the School of Education by the Dean of Admissions upon the recommendation of the Personnel Committee of the School of Education.

The selection of students will be based upon personal characteristics, health and physical fitness, and evidence of promise of developing into successful teachers or workers in related fields.

Candidates living in or within reasonable traveling distance of Philadelphia are required to report for a personal interview at the office of the School of Education, Eisenlohr Hall, 3812 Walnut Street. Appointments may be arranged by writing to the Dean of the School of Education.

Candidates who are unable to report for the interview must submit the names and addresses of three persons qualified to recommend them for admission to the School of Education.

ADMISSION WITH ADVANCED STANDING

A limited number of students qualified for admission with advanced standing may be accepted provided places are available. An applicant for admission as a regular student, who has recently been a student in an educational institution ranking higher than a secondary school, should present complete information concerning his work in all educational institutions above the grammar school.

---

[1] Applicants for admission to the Five Year Program see page 28; to the Graduate Division see pages 61, 63.

To become eligible for an undergraduate degree, a student who has transferred to the University of Pennsylvania from another college or university is required to complete the equivalent of two academic years of work at the University of Pennsylvania. The work of the final academic year must be completed in the undergraduate department in which the degree if expected to be earned.

Since admission is on a competitive basis, consideration can be given only to those applicants who present records which are free of conditions, failures, or incomplete grades. No advanced credit will be allowed for less than a full year of attendance elsewhere, and a candidate may not disregard his college record and seek admission to the Freshman Class.

A formal application for admission with advanced credit should be filed with the Dean of Admissions, 3435 Spruce Street, Philadelphia 4, and a complete transcript of the student's college record, including a statement of honorable dismissal, should be submitted as soon as possible.

ADMISSION OF PART-TIME AND SPECIAL STUDENTS

Teachers in service and nurses who have met the requirements for admission may register in the School of Education as after-school students. Courses which are open to part-time and special students are offered in the afternoons, evenings and on Saturday mornings.

A candidate who has not submitted his formal application for admission and all credentials at least four weeks prior to the opening date of any term may register as a Special Student in the College Collateral Courses, 116 College Hall. However, the selection of subjects will be limited to those offered in the College Collateral Courses. (See the bulletin of the College Collateral Courses.)

Special students are admitted to the Vocational Teacher Education curricula upon recommendation of the Director of Vocational Teacher Education.

A special student is eligible for transfer to regular standing as a candidate for a degree upon fulfilling *either* of the following conditions:

a. Satisfaction of the requirements for admission to regular standing in the School of Education as outlined on page 28, or

b. Graduation from an accredited high school or from a vocational school of high school level approved by the Dean of Admissions upon recommendation of the Director of Vocational Teacher Education and completion of at least thirty semester credits at the University of Pennsylvania with an average grade of "C" or better and with not less

than twelve of this number in subjects other than Education. Appropriate trade experience approved by the Director of Vocational Teacher Education is required. Students should note that transfer from special to regular standing takes place in September for those wishing to graduate in June of the following year. Therefore application for transfer from special to regular standing should be made through the Office of Admissions, 3435 Spruce Street in February or March in order that the transfer may be made in September.

THE STATUS AND CLASSIFICATION OF STUDENTS

A regular student is one who has satisfied the entrance requirements.

A special student is one who has not met the entrance requirements. He may register only in the Department of Vocational Teacher Education.

A semester credit is one hour a week of lecture or recitation, or two hours of laboratory work a week for one term.

A student who has, at the beginning of any college year, fewer than 30 semester credits (exclusive of physical education) is classed as a Freshman.

A student who has, at the beginning of any college year, fewer than 58 semester credits (exclusive of physical education) and not fewer than 30 semester credits is classed as a Sophomore.

A student who has, at the beginning of any college year, fewer than 90 semester credits (exclusive of physical education) and not fewer than 58 semester credits is classed during that year as a Junior.

A student with 90 or more semester credits (exclusive of physical education) at the beginning of any college year is classed as a Senior.

Summer school work at the University in courses approved by the faculty of the School of Education may be counted as residence work.

Students desiring to take work in another institution to be credited in the School of Education must have the written consent of the Dean of the School of Education and the Dean of Admissions.

CULTURAL OLYMPICS

The Cultural Olympics, established in the fall of 1936, is designed to stimulate interest in the fine arts as leisure time activities. Festivals in music, dancing and speech and literature and art exhibitions are held on the campus. Conferences and demonstrations for teachers are also included in the program. All activities are conducted on a strictly non-competitive, cooperative basis. High standards of excellence are maintained by a group of judges who give an individual analysis of each performance on standard

forms. Outstanding ability is recognized through the granting of Certificates of Merit, and although the Cultural Olympics does not award scholarships, it has been influential in placing especially qualified young artists on free scholarships in prominent schools of art, music and dance, and has provided art material for deserving students. The Cultural Olympics is not a teaching organization, and therefore gives no courses and offers no credit. Participation in the Cultural Olympics is open to all persons and to school and community groups in the states of Pennsylvania, New Jersey, Delaware and Maryland. The program is under the direction of Dr. Frederick C. Gruber, to whom all inquiries should be addressed at Room 201E, Eisenlohr Annex, 3810 Walnut St., Philadelphia 4.

READING CLINIC

In connection with the service functions of the School of Education a Reading Clinic was established in the fall of 1937. The function of the Clinic is to provide opportunity for teachers to get actual practice in the diagnosis and treatment of reading disability cases, and to serve University students and pupils in the public and private schools within reach of the University in the diagnosis and, if need be, in the correction of cases of reading disability. The Clinic is modernly equipped with various instruments for diagnosis and training. The Clinic, Eisenlohr Annex, 3810 Walnut St., is under the general direction of Associate Professor Ralph C. Preston.

EDUCATIONAL SERVICE BUREAU

The University of Pennsylvania established the Educational Service Bureau in October, 1939. The chief function of the Bureau is the provision of professional assistance to educational agencies in the solution of their problems. Since its establishment, the Bureau has rendered service to public and private schools, higher institutions, governmental and social agencies and to state, regional and national professional organizations in the promotion of research and service programs. The Bureau has the extensive resources of staff and facilities of the School of Education and other divisions of the University upon which to draw in the promotion of its service program.

The services offered by the Educational Service Bureau are two kinds. Free advisory service is extended to individuals and groups in the conference rooms and the office of the Director and staff. Field service will generally require payment of the usual fees for such service. Consultation with the Director will be necessary in order to determine the kind and extent of the service required.

Address all inquiries to Dr. William E. Arnold, the Director of the Educational Service Bureau, School of Education, University of Pennsylvania, 3810 Walnut Street, Philadelphia 4, Pennsylvania.

ILLMAN-CARTER UNIT—HISTORICAL SKETCH

The Illman Training School for Kindergarten and Primary Teachers was established in October, 1904, by Miss Alice Carter, of Philadelphia, now Mrs. William Carter Dickerman, of New York City, with Miss Caroline M. C. Hart, of Baltimore, Maryland, as Director. The founding of the school was the result of an intense interest on the part of Mrs. Dickerman in the work of the kindergarten and a realization of the value of two mission kindergartens which she had established in the poorer districts of the city.

For the first year the course consisted of a series of lectures given at Drexel Institute. The next year the School secured accommodations at Twelfth and Walnut Streets, and later was located at 1615 Walnut Street, where it remained until 1912. The enrollment increased rapidly, and in the Fall of 1912 the school was moved to 3600 Walnut Street.

After the death of Miss Hart, in 1918, Miss Adelaide T. Illman was appointed Director, and in 1920 the name was changed to Miss Illman's Training School for Kindergarten and Primary Teachers.

The rapid growth of the school made it necessary, in 1921, to purchase the building at 4000 Pine Street and in 1927 an addition was erected giving additional classrooms and accommodating the kindergarten and grades of the demonstration school. In May, 1928, a charter was granted by the State of Pennsylvania, thus incorporating the School, the name thereafter to be Illman Training School for Kindergarten and Primary Teachers.

On July 1, 1936, the Training School became an integral part of the University of Pennsylvania known as the Illman-Carter Unit for Kindergarten and Primary Teachers of the School of Education of the University of Pennsylvania.

THE DEMONSTRATION SCHOOL

The Illman School for Children at 3944 Walnut Street and 3935 Locust Street is an integral part of the Illman-Carter Unit. It serves as a demonstration and practice center for students preparing for teaching in the elementary field and as a research center in elementary education. The Director of the Illman-Carter Unit serves as the Director of the School and the Assistant Director of the Unit serves as Principal.

VOCATIONAL TEACHER EDUCATION

ORGANIZATION

The courses in Vocational Teacher Education are organized in accordance with the provisions of the Smith-Hughes Act, and are under the executive direction of the President of the University and the Dean of the School of Education.

The program is under the direct supervision of the Director of Vocational Teacher Education of the faculty of the School of Education.

The Department offers facilities for preparing teachers in Home Economics, Shop and Related Subjects in Industrial Education.

ENTRANCE REQUIREMENTS

The Home Economics curriculum is open to any candidate who can satisfy the admission requirements of the School of Education as outlined on page 28.

The Industrial Education curriculum for Shop teachers is open only to those who have had six years of trade experience including at least two of journeyman grade.

The Industrial Education curriculum for Related Subject teachers is open to those who can meet the requirements for Shop teaching and also to college graduates with at least eighteen semester credits in mathematics, physical science or mechanical drawing who have had at least two years of approved employment experience in industry.

FEES AND DEPOSITS

The regulations regarding financial obligation of students described on pages 19-23 apply to Vocational Teacher Education students except in the case of part-time or special students as noted below.

1. A term registration fee of five dollars for each subsidized course will be required of all students.

2. No tuition charge will be made to students admitted to the Department of Vocational Teacher Education for any courses in education given especially for them. Fees for all other courses will be charged at the regular rate.

Each new student is required to pay the matriculation fee of five dollars.

Each student entering the Department of Vocational Teacher Education is required to make a money deposit of fifteen dollars ($15) to cover loss of books, keys, etc., breakage in laboratories, damage to University property

and other expenses. Any balance is returned upon graduation or withdrawal from the School of Education.

AREA COORDINATORS OF VOCATIONAL EDUCATION

Close relationship with the administration of vocational education in schools and in industry is maintained by the Vocational Teacher Education Staff. They are assisted by Area Coordinators located at the University who are assigned by the Pennsylvania Department of Public Instruction to serve as its direct representatives in the field. This mutually advantageous relationship provides staff and students with first hand information concerning school practices, employment trends and opportunities and technological advance in industry. As students near certification status they should take advantage of this opportunity.

VOCATIONAL TEACHER EDUCATION COURSES FOR 1951-52

For Vocational Teacher Education Courses see pages 98-100.

REQUIREMENTS FOR DEGREES

For the requirements for degrees see pages 37, 38.

SPECIALIZATION

Specialization in the School of Education means the field of service chosen by the student. This may be teaching or it may be service in a field closely related to teaching.

The Fields of Specialization

For fields of specialization in the Five Year Curriculum, see pages 38, 39; for Kindergarten-Elementary Education, see page 40. For areas of specialization in the Master of Science in Education and Doctor of Education, consult pages 61-63 and 74, 75 respectively.

THE FIVE YEAR PROGRAM

PURPOSE

The purpose of the five year program is to provide for future teachers a preparation which includes a broad cultural background, thorough specialization and superior professional education. With the exception of those who entered the kindergarten-primary curriculum prior to September, 1949 the completion of the entire five year program is required for a certificate to teach.

ADMISSION

Students meeting the admission requirements as stated on pages 28-30 will be admitted to the School of Education by the Dean of Admissions upon the recommendation of the Personnel Committee of the School of Education.

The selection of students will be based upon personal characteristics, health and physical fitness, and evidence of promise of developing into successful teachers or workers in related fields.

Candidates living in or within reasonable traveling distance of Philadelphia are required to report for a personal interview at the office of the School of Education, Eisenlohr Hall, 3812 Walnut Street. Appointments may be arranged by writing to the Dean of the School of Education.

Candidates who are unable to report for the interview must submit the names and addresses of three persons qualified to recommend them for admission to the School of Education.

Any student admitted who later gives evidence of being an unsatisfactory candidate for the teaching profession will be required to withdraw. Special attention will be given to this matter at the end of the Sophomore year and again at the end of the Senior year.

REQUIREMENTS FOR THE DEGREE OF BACHELOR OF SCIENCE IN EDUCATION

GENERAL STATEMENT

The degree of Bachelor of Science in Education is granted to properly matriculated students who satisfactorily complete the first four years of one of the curricula provided at least two years of study (60 semester credits) are completed at the University of Pennsylvania. The last year must be completed as a matriculated student in the School of Education. *The granting of the degree, however, does not meet the requirements for a teaching*

certificate which is awarded only after the completion of the fifth year. The degree is intended to represent a liberal education with some emphasis upon a particular field of educational service.

Note: The elementary course in a foreign language may not be offered in satisfaction of the foreign language requirement and may count only as elective credit.

SPECIALIZATION

General Regulations

At the time of the first registration every student is required to fill out a card indicating the field of service for which he wishes to prepare. Vice Dean Thomas E. McMullin will serve as adviser for the first two years. Before registering for the Junior year a final choice of a field of specialization must be made and approved by the official representative of the department concerned. The student then will be assigned to a departmental adviser. This adviser will review the previous work of the student, discuss the desirability of his choice and plan the courses to be pursued. The adviser will send to the Dean a written statement indicating the acceptance or rejection of the student in the field chosen. It is understood that any acceptance is provisional and may by *withdrawn* if the work of the student is not of sufficiently high quality to warrant his continuing in that field of preparation. Students may at any time apply to the Dean for a change in the field of service originally chosen. The student should be aware, however, that such a change may require additional study.

In planning specialization it is very important to have clearly in mind the type of position that one will be likely to secure at the completion of the course. The first position in Junior or Senior high school generally requires the teaching of more than one subject. Accordingly, the student's program should be arranged to make possible adequate preparation for teaching in at least two fields. Other forms of educational service, such as teaching in the kindergarten and elementary schools, and service closely related to teaching, require somewhat similar broad and general preparation.

Curricula in the Five Year Program

The School of Education prepares students to teach in the kindergarten and in the elementary and secondary schools and for educational activity closely related. The following curricula are provided:

a. Teaching the Subjects of the Kindergarten and Elementary Grades.

b. Teaching Academic Subjects in the Secondary School.

English; Foreign Language; Geography; Mathematics; Science; Social Studies.

c. Teaching Social Studies in Latin-American Countries.
d. Teaching and Supervision of Special Subjects.
Art Education; Business Education; Health, Physical Education and Recreation; Home Economics; Music Education; Vocational Subjects.
e. School Dental Hygienists.
f. Psychological Service.
Teacher of Corrective Speech, and Mentally Retarded Children.
g. Work with the Blind.

CERTIFICATION TO TEACH

Recommendation for teacher certification is the exclusive function of the School of Education. All candidates for initial certification are required to complete the Five Year Program or its equivalent as described in this bulletin except those enrolled in the kindergarten-primary program prior to September 1949; such candidates are required to complete the program in force at the time of their matriculation.

Students desiring to qualify for the teaching of a second subject are advised to select one related to their field of specialization. They also are advised to make certain that the amount of credit obtained in the second subject fulfills the certification requirement of the state in which they wish to teach. *For advice concerning this matter consult Miss Cotton, Assistant to the Dean, Vice-Dean McMullin or Miss Collins, Personnel Officer.*

Students holding certificates to teach in the secondary school who have had three years of teaching experience in the public schools may, according to Pennsylvania State regulations, qualify for the extension of such certificates for the elementary field by the completion of thirty semester credits chosen from a list published by the Department of Public Instruction.

In accord with the Pennsylvania State regulation, students having three or more years of teaching experience and holding a certificate to teach in the elementary schools of Pennsylvania may extend that certificate to include the teaching of a subject in the secondary school upon completion of: (1) the subject matter requirement; (2) six (6) semester credits in secondary education; and (3) supervised student teaching on the secondary level or a project germane to secondary teaching in lieu of supervised student teaching. Experience cannot be accepted in lieu of supervised student teaching.

For information regarding details relative to above statements and specific requirements of particular states, inquiry should be made in the School of Education Office.

PROGRAM FOR THE PREPARATION OF KINDERGARTEN-ELEMENTARY SCHOOL TEACHERS*

Students who entered the School of Education in 1949-50 and thereafter with the intention to prepare to teach in the elementary school will complete this program.

	Semester Credits				
	Fresh. Year	Soph. Year	Junior Year	Senior Year	5**
Group I General Subjects					
English 102, 103, 130, 140	6	6			
Foreign Language	6				
History 96C			2		
Social Science Electives		3	3	4	
Psychology 1		6			
Science (Botany or Zoölogy)	6				
Group II Professional Subjects					
General Orientation					
Education 1—Introduction	2				
Education 2—Educ. & Social Evolution			4		
Child Development					
Education E4—Child Study	4				
Education E16—Child Hygiene		2			
Education E17—Speech for the Classroom Teacher			2		
Education E34—Evaluation & Recording of Learning Outcomes				2	
Psychology E3—Educational Psychology			3		
Participation					
Education E8—Directing Child Activities		4			
Education E9—Practice Teaching				4	
Education E10—Practice Teaching				4	
Education E500—Conference				3	6
Internship					x
Classroom Procedure or Management					
Education E11—Educ. of Young Child		3			
Education E7—Principles of Teaching			2		
The Arts					
Art Ed. 3—Technique of Art			2		

(Concluded on Next Page)

* All students who entered as Freshmen prior to September 1949, who are registered in the former Four Year Program, and all transfers now registered in the former Four Year Program should advise with Dr. Laura Hooper in regard to their programs. Beginning September 1951 all transfers entering the School of Education will enroll in the Five Year Program. Students who entered the School of Education prior to September 1949, who are completing the former Five Year Program, confer with Dr. Mary E. Coleman.

** Students in the Five Year Program may also enroll for additional hours of graduate work with the approval of the adviser.

Semester Credits

	Fresh. Year	Soph. Year	Junior Year	Senior Year	5**
Art Ed. 4—Hist. & Apprec. of Art .	2				
Ed. E2—Industrial Arts		2			
Ed. E22—Music Theory	3				
Ed. E23—Teaching of Music		3			
Language Arts					
Ed. E12—Literature for Children ..		2			
Ed. E126—Teaching of Reading ..			2		
Ed. E128—Teaching of Language .			3		
Sciences					
Ed. E130—Teaching of Science			2		
Ed. E129—Teaching of Arithmetic		2			
Ed. E131—Teaching of Social Studies			2		
Group III Electives	3		6	9	
Group IV Physical Education	2	2	2	2	
	34	35	37	28	6

** Students in the Five Year Program may also enroll for additional hours of graduate work with the approval of the adviser.

CURRICULA FOR THE PREPARATION OF SECONDARY TEACHERS OF ACADEMIC SUBJECTS

English

NOTE.—The speaking of any other language *as a native tongue* is a definite handicap to the teacher of English in the secondary school. Students in this situation should not specialize in the teaching of English without serious consideration of this disadvantage.

Semester Credits

	Fresh. Year	Soph. Year	Junior Year	Senior Year	Grad. Year
Group I General Subjects					
English 102, 103, 130, 140	6	6			
Foreign Language	6				
Science	6				
Social Studies[1]	6				
Additional from above or Mathematics	2		4		
Psychology 1		6			
Group II Professional Subjects					
Education 1	2				
Education 2		4			
Education 3 and 4				9	
Education 650					2
Education 651					2
Education S5					10
Education S538 and S539					4
Education S661					2
Psychology E3			3		
Group III Specialization					
English		2	8	8	6
English 34			2		
Related Subjects[2]		4	4	4	
Group IV Electives	3	9	10	10	
Group V Physical Education	2	2	2	2	
Totals	33	33	33	33	26

Undergraduate specialization in the teaching of English requires 32 semester credits including required courses in English. *A general average of B in English courses must be maintained.*

Objectives to be attained are:

1. A systematic and comprehensive knowledge of English Literature.
2. A sense of literary values.
3. A marked ability to impart understanding of and an enthusiasm for books.

[1] For a certificate in Pennsylvania this must include History 96.
[2] Subject to the approval of the Dean and the Department of English.

Students specializing in the teaching of English will be required to present one or more courses in each of the following periods:

Old English (to 1150)
Middle English and the 15th Century (to 1550)
Elizabethan Drama, 1550-1660
Elizabethan Prose and Poetry
The Restoration and the 18th Century, 1660-1780
The Romantic Period, 1780-1837
Victorian Literature, 1837-1885
Contemporary English Literature, 1885-
American Literature to the Civil War
American Literature from the Civil War to the Present Day
Foreign Languages (French, German, Italian, Latin, Portuguese, Spanish)

Requirements for Beginning Specialization.—

Satisfactory reading ability and knowledge of the essentials of grammar and composition in the language chosen.

Semester Credits

	Fresh. Year	Soph. Year	Junior Year	Senior Year	Grad. Year
Group I General Subjects					
English 102, 103, 130, 140	6	6			
Foreign Language	6				
Science	6				
Social Studies[1]	6				
Additional from above or Mathematics	2	4			
Psychology 1		6			
Group II Professional Subjects					
Education 1	2				
Education 2		4			
Education 3 and 4				9	
Education 650					2
Education 651					2
Education S5					10
Education S536					4
Education S661					2
Psychology E3			3		
Group III Specialization					
Major Foreign Language		6	12	12	6
Group IV Electives	4	6	16	8	
Group V Physical Education	2	2	2	2	
Totals	34	34	33	31	26

[1] For a certificate in Pennsylvania this must include History 96.

Undergraduate specialization in the teaching of a foreign language requires 36 semester credits including the required course (intermediate level) in the language chosen. Students specializing in French or Spanish should include French 300 or Spanish 300 in these credits.

Objectives to be attained are:

1. A knowledge of the language sufficient to translate into clear, correct, natural and idiomatic English, moderately difficult prose and poetry; and also to translate into the foreign language, simple English narrative prose.

In addition, for *foreign modern languages*

a. Accurate pronunciation

b. Ability to express in speech, simple thought in a clear manner

2. A knowledge of the main currents of the literature, including the names of the authors and their works.

3. A substantial knowledge of the historical background of the literature and language.

Students are urged to prepare to teach a second foreign language.

Geography

Semester Credits

	Fresh. Year	Soph. Year	Junior Year	Senior Year	Grad. Year
Group I General Subjects					
English 102, 103, 130, 140	6	6			
Foreign Language	6				
Science		6			
Social Studies[1]	6				
Additional from above or Mathematics	2	4			
Psychology 1		6			
Group II Professional Subjects					
Education 1	2				
Education 2		4			
Education 3 and 4				9	
Education 650					2
Education 651					2
Education S5					10
Education S534					4
Education S661					2
Psychology E3			3		
Group III Specialization					
Geography	4	4	4	3	6
Anthropology, Economics, Geology..			8	2	
Group IV Electives	6	2	16	15	
Group V Physical Education	2	2	2	2	
Totals	34	34	33	31	26

[1] For a certificate in Pennsylvania this must include History 96.

Mathematics

Semester Credits

	Fresh. Year	Soph. Year	Junior Year	Senior Year	Grad. Year
Group I					
English 102, 103, 130, 140	6	6			
Foreign Language	6				
Science	6				
Social Studies[1]	6				
Additional from above or Mathematics		2	4		
Psychology 1		6			
Group II Professional Subjects					
Education 1	2				
Education 2		4			
Education 3 and 4				9	
Education 650					2
Education 651					2
Education S5					10
Education S661					2
Education S675					4
Psychology E3			3		
Group III Specialization					
Mathematics	3	7	8	6	6
Related Work[2]		4	4	6	
Group IV Electives	3	3	12	8	
Group V Physical Education	2	2	2	2	
Totals	34	34	33	31	26

Undergraduate specialization in the teaching of mathematics requires 24 semester credits.

Objectives to be attained are:

1. A practical and theoretical familiarity with elementary mathematical operations up to and including the calculus. *A general average of B must be maintained in courses covering this content.*

2. An introductory knowledge of some aspects of higher geometry and analysis, together with some appreciation of the implications of these subjects on those taught in secondary schools.

3. Some knowledge of the development of mathematical ideas, and of their simpler applications.

4. Distinct promise of real ability to present expository mathematical material.

5. At least one contact with courses leading toward graduate work.

[1] For a certificate in Pennsylvania this must include History 96.
[2] Subject to the approval of the Dean and the Department of Mathematics.

Science

NOTE.—Students preparing to teach science in the secondary school must complete the elementary work in the following four major areas of science. Three of these areas must be completed during the first two years of college study.

a. Beginning course in botany.
b. Beginning course in zoölogy.
c. Beginning course in chemistry—including inorganic chemistry and qualitative analysis.
d. Beginning course in physics—including dynamics, heat, light, sound, magnetism and electricity.

Before beginning the course in physics students must have completed a course in trigonometry.

Semester Credits

	Fresh. Year	Soph. Year	Junior Year	Senior Year	Grad. Year
Group I					
English 102, 103, 130, 140	6		6		
Foreign Language	6				
Science	6				
Social Studies[1]			6		
Additional from above or Mathematics	6				
Psychology 1		6			
Group II Professional Subjects					
Education 1	2				
Education 2		4			
Education 3 and 4				9	
Education 650					2
Education 651					2
Education S5					10
Education S661					2
Education S676					4
Psychology E3			3		
Group III Specialization					
Major Science	6	6–12	6–12	2–8	6
Other Sciences		6–10	6–12	6–12	
Mathematics		0–4	0–6		
Group IV Electives[2]		0–10	0–2	0–8	
Group V Physical Education	2	2	2	2	
Totals	34	34	33	31	26

[1] For a certificate in Pennsylvania this must include History 96.

[2] The student should elect the general course in at least two of the following fields: Anthropology, Astronomy, Bacteriology, Geography, Geology, Mineralogy and Physiology.

The number of semester credits taken in specialization and in electives varies according to the major science chosen. Hence, it is not possible to tabulate the exact number of credits taken each term. The upper and lower limits in each group are given. The electives vary from 10 to 25 semester credits.

Specializing in the teaching of science varies with the student's interest as indicated below.

Objectives to be attained are:

1. Knowledge and understanding of facts and principles of the four fundamental fields of science—physics, chemistry, botany and zoölogy—which have significance in teaching in secondary schools.

2. Knowledge of facts, principles and procedures in one field of science sufficient to undertake graduate or research work in that field with profit.

3. Knowledge of allied fields, astronomy, anthropology, bacteriology, geography, geology, mineralogy and physiology sufficient to read and explain topics of general interest in those fields.

4. Vital interest in science as indicated by leisure time reading recreation and hobbies.

5. Knowledge of controversial questions sufficient to present arguments of each side effectively.

The student specializing in the teaching of science must complete the courses listed in the *note* on page 46 and at least *one* of the *following groups* as organized at the University of Pennsylvania, or equivalent courses. Other courses may be substituted or a combination of two groups may be made with the approval of the departments concerned. The particular groups should be selected on the basis of the student's special interest and should be in the field in which he is most desirous of teaching.

1. Botany: twenty s. c. from the exclusively undergraduate courses in Botany.

2. Chemistry: Chemistry 6, 8, 11, and two s. c. chosen from 11A, 26, 102, 115, 124 and 131. Mathematics 6 and 8.

3. Physics: eighteen s. c. from courses for majors including two laboratory courses. Mathematics 6 and 8.

4. Zoölogy: at least twenty s. c. in Zoölogy.

The general course in at least two of the following fields is advisable: anthropology, astronomy, bacteriology, geography, geology, mineralogy and physiology.

Social Studies

Semester Credits

	Fresh. Year	Soph. Year	Junior Year	Senior Year	Grad. Year
Group I General Subjects					
English 102, 103, 130, 140	6	6			
Foreign Language	6				
Science	6				
Social Studies[1]	6				
Additional from above or Mathematics	2	4			
Psychology 1		6			
Group II Professional Subjects					
Education 1	2				
Education 2		4			
Education 3 and 4				9	
Education 650					2
Education 651					2
Education S5					10
Education S534					4
Education S661					2
Psychology E3			3		
Group III Specialization					
History					
European			6	6	
American		6			
Advanced course			2		
Social Sciences					
Economics		4	0–2		
Political Science			4	0–2	
Sociology			0–2	4	6[2]
Electives (Economics, Political Science, Sociology, Geography, Anthropology)			4–0	4–0	
Group IV Electives	4	2	8–16	4–10	
Group V Physical Education	2	2	2	2	
Totals	34	34	33	33	26

Undergraduate specialization in the teaching of social studies requires 40 semester credits including the required credits in social studies.

Objectives to be attained are:

1. A knowledge and an understanding of facts and principles necessary for teaching the social studies in secondary schools.
2. Ideals of civic leadership in social, political and economic life.
3. Attitudes of social and civic mindedness.
4. Abilities necessary for rendering constructive judgment and decisions about social affairs.
5. The cultivation of a working philosophy of life.
6. The development of cultural interests and appreciations which bring constant enrichment to life.
7. *A general average of B in Social Studies Courses must be maintained.*

[1] For a certificate in Pennsylvania this must include History 96.
[2] To be selected from the social studies with the approval of the adviser.

CURRICULUM FOR THE PREPARATION OF TEACHERS AND SUPERVISORS OF ART

Semester Credits

	Fresh. Year	Soph. Year	Junior Year	Senior Year	Grad. Year
Group I General Subjects					
Botany or Zoölogy		6			
English 102, 103, 130, 140	6	6			
History[1]			3		
Modern Language	6				
Psychology 1		6			
Sociology	3				
Group II Professional Subjects					
Education 1	2				
Education 2			4		
Education 3 and 4				9	
Education 650					2
Education 651					2
Education F520					4
Education S5					10
Education S661					2
Psychology E3			3		
Group III Specialization					
Art Education 1 or 2			2		
Fine Arts 4	6				
Fine Arts 5 or 7		4			
Fine Arts 126 a & b	4				
Fine Arts 111	4				
Fine Arts 211 a & b		4			
Fine Arts 213 a & b			4		
Fine Arts 311 a & b			4		
Fine Arts 313 a & b			2		
Fine Arts 411 a & b				4	
Fine Arts 210		2			
Fine Arts 212		2			
Fine Arts 314 a, b & c			6		
Fine Arts 412 a, b & c				6	
Fine Arts 413 a & b				4	
Fine Arts 414 a & b				6	
Fine Arts, Grad.					6
Group IV Electives			2	4	
Group V Physical Education	2	2	2	2	
Totals	33	32	32	35	26

[1] For a certificate in Pennsylvania this must include History 96.

CURRICULUM FOR THE PREPARATION OF TEACHERS OF BUSINESS EDUCATION

Semester Credits

	Fresh. Year	Soph. Year	Junior Year	Senior Year	Grad. Year
Group I General Subjects					
Economics 2		6			
English 102, 103, 130, 140	6	6			
Foreign Language	6				
Political Science		6			
Science	6				
Psychology 1		6			
Group II Professional Subjects					
Education 1	2				
Education 2			4		
Education 3 and 4				9	
Education 650					2
Education 651					2
Education S5					10
Education S661					2
Psychology E3			3		
Group III Specialization[1] and Electives[2]					
a. Required of all					
Geography 1	6				
Accounting 1		6			
Business Law 1			6		
English 120			2		
Finance 1			4		
Education B20				3	
Education B21				3	
Specialization (Graduate)					10[3]

(*Concluded on Next Page*)

[1] *Business experience,* although not required for graduation, is frequently required for teaching positions. Students are therefore urged to secure as much experience as possible during summer vacations and during the interval between graduation and initial employment as a teacher. Consult adviser.

[2] Consult adviser concerning suitable combinations of electives and methods courses in order to prepare for the fifth year as well as to meet the requirements of teaching positions. *For a certificate in Pennsylvania this must include History 96.*

[3] Graduate work in Specialization to be selected with the approval of the adviser.

Semester Credits

	Fresh. Year	Soph. Year	Junior Year	Senior Year	Grad. Year
b. Electives from the following:					
(1) Accounting (including office practice)					
Accounting 2			6		
Clerical Practice 1				3	
Electives	4	2	7	12	
(2) Marketing Specialization and Electives	4	2	13	15	
(3) Secretarial[1] (including office practice)					
Shorthand 1			5		
Typewriting 1			3		
Shorthand 2				4	
Typewriting 2				3	
Clerical Practice 1				3	
Electives	4	2	5	5	
(4) Social-Business Subjects Economics, Finance, History, Geography, Law, Political Science and Electives	4	2	13	15	
Group IV Physical Education	2	2	2	2	
Totals	32	34	34	32	26

[1] A knowledge of shorthand, typewriting and clerical practice is desirable but not required for admission to the curriculum for the preparation of business teachers. Students who expect to teach one or more of these subjects, but who have not acquired the necessary abilities previous to the Junior year in college may secure them as part of the School of Education program for the preparation of teachers of business subjects.

CURRICULUM FOR THE PREPARATION OF TEACHERS OF HEALTH AND PHYSICAL EDUCATION AND RECREATION

	Semester Credits				
	Fresh. Year	Soph. Year	Junior Year	Senior Year	Grad. Year
Group I General Subjects					
Bacteriology 1		4			
English 102, 103, 20, 130, 140	8	6			
Foreign Language	6				
Psychology 1		6			
Social Studies[1]	6				
Zoölogy 1	6				
Group II Professional Subjects					
Education 1	2				
Education 2		4			
Education 3 and 4				9	
Education 650					2
Education 651					2
Education S5					10
Education S661					2
Psychology E3			3		
Group III Specialization					
Health Education 310			2		
Health Education 320			2		
Health Education 410				2	
Health, P.E., and Recreation 210		4			
Health, P.E., and Recreation 312			2		
Health, P.E., and Recreation 313			2		
Health, P.E., and Recreation 411				4	
Health, P.E., and Recreation 421				2	
Physical Education 100	1				
Physical Education 101	3				
Physical Education 200 (Women)		1			
Physical Education 201		2			
Physical Education 202		1			
Physical Education 203		1			
Physical Education 300			½		
Physical Education 301			1		
Physical Education 302			1		
Physical Education 303			1		
Physical Education 304			½		
Physical Education 321			2		
Physical Education 322			2		
Physical Education 400				1	
Physical Education 401				2	
Physical Education 402				½	
Physical Education 403				½	
Physical Education 420				2	
Recreation 412				2	
Recreation 422				2	
Specialization, Graduate					10
Group IV Electives		4–5	15	6	
Totals	32	33	34	33	10

[1] For a certificate in Pennsylvania this must include History 96.

CURRICULUM FOR THE PREPARATION OF TEACHERS OF SOCIAL STUDIES FOR LATIN-AMERICAN COUNTRIES

The following program including five years of work is for the preparation of those who do not hold college degrees but wish to prepare to teach social studies in the Latin-American countries. Proficiency in the language of the country in which the student wishes to teach is required. The program provides for a certificate to teach social studies in Pennsylvania in case the candidate does not secure a position in the Latin-American countries.

Semester Credits

	Fresh. Year	Soph. Year	Junior Year	Senior Year	Grad. Year
Group I General Subjects					
Economics 2		6			
English 102, 103, 130, 140	6	6			
History 96	6				
Psychology 1		6			
Science	6				
Sociology 1	3				
Spanish 2	6				
Spanish 4 or Portuguese 1		6			
Group II Professional Subjects					
Education 1	2				
Education 2		4			
Education 3 and 4				9	
Education 650					2
Education 651					2
Education S5					10
Education S534					4
Education S661					2
Psychology E3			3		
Group III Specialization					
American History			4		
Anthropology 27				4	
Geography 6				4	
History 143			4		
History 187				4	
History 188				4	
Political Science 2			6		
Political Science 54			4		
Portuguese 1 or 2			6		
Sociology 510		4			
Spanish 8			4		
Spanish American Literature				4	
Specialization[1] (Graduate)					6
Group IV Electives	2			1	
Group V Physical Education	2	2	2	2	
Totals	33	34	33	32	26

[1] To be selected from the Latin-American studies with the approval of the adviser.

CURRICULUM FOR THE PREPARATION OF TEACHERS AND SUPERVISORS OF MUSIC

Semester Credits

	Fresh. Year	Soph. Year	Junior Year	Senior Year	Grad. Year
Group I General Subjects					
English 102, 103, 130, 140	6	6			
Foreign Language	6				
Psychology 1		6			
Science				6	
Social Studies[1]			6		
Group II Professional Subjects					
Education 1	2				
Education 2			4		
Education 3b and 4b				5	
Education S5					10
Education 650					2
Education 651					2
Education S661					2
Education M24			4		
Education M520					2
Education M521					2
Education M522					2
Education M523					2
Education M524					2
Psychology E3			3		
Group III Specialization[2]					
Music 1	4				
Music 5, 6, or 7	4				
Music 10				2	
Music 20	3				
Music 21		3			
Music 30		4			
Music 31, 539 or 549	4	4	4	4	
Music 33			2		
Music 35			2		
Music 37				2	
Music 39	2				
Music 534		3	3	3	
Music 536	1	2	2	2	
Music 538		2	2	2	
Music 540				4	
Group IV Physical Education	2	2	2	2	
Totals	34	32	34	32	26

[1] For a certificate in Pennsylvania this must include History 96.

[2] The music courses comprising specialization will vary in accord with the student's proficiency A minimum of 62 s. c. in Music is required of all students.

CURRICULUM FOR THE PREPARATION OF TEACHERS OF MENTALLY RETARDED CHILDREN

Semester Credits

	Fresh. Year	Soph. Year	Junior Year	Senior Year	Grad. Year
Group I General Subjects					
English 102, 103, 130, 140	6	6			
Foreign Language	6				
Science	6				
Social Studies[1]	6				
Additional from above or Mathematics	2	4			
Psychology 1		6			
Group II Professional Subjects					
Art Education 3			2		
Art Education 4		2			
Education 1	2				
Education 2		4			
Education 650					2
Education 651					2
Education E4	4				
Education E5[2]					10
Education E8		4			
Education E22				3	
Education E126				2	
Education E129				2	
Education E34				2	
Education E542					2
Education E16			3		
Psychology E3			3		
Group III Specialization					
Education Electives[3]					8–6
Psychology 30			2		
Psychology 31			2		
Psychology 33			2		
Psychology 34				6	
Psychology 54			2		
Psychology 55				2	
Psychology 58				2	
Psychology 59			2		
Psychology 660e					2–4
Sociology 22				4	
Group IV Electives		4	13	10	
Group V Physical Education	2	2	2	2	
Totals	34	32	33	33	26

[1] For a certificate in Pennsylvania this must include History 96.

[2] Must include teaching classes for mentally retarded children.

[3] Student may elect graduate work in elementary education or psychology depending upon his interests.

CURRICULUM FOR THE PREPARATION OF TEACHERS OF CORRECTIVE SPEECH

Semester Credits

	Fresh. Year	Soph. Year	Junior Year	Senior Year	Grad. Year
Group I General Subjects					
English 102, 103, 130, 140	6	6			
Foreign Language	6				
Science	6				
Social Studies[1]	6				
Additional from above or Mathematics		6			
Psychology 1		6			
Group II Professional Subjects					
Art Education 3			2		
Art Education 4	2				
Education 1	2				
Education 2		4			
Education 650					2
Education 651					2
Education E4	4				
Education E5					10[2]
Education E8			4		
Education E16			3		
Education E126				2	
Education E129				2	
Education E34				2	
Education E542					2
Education M22			3		
Psychology E3			3		
Group III Specialization					
Education 530					2
English 34				2	
Psychology 30			2		
Psychology 31			2		
Psychology 32				4	
Psychology 33				2	
Psychology 35				2	
Psychology 36				2	
Psychology 54			2		
Psychology 55				2	
Psychology 59			2		
Psychology 660f					4
Psychology Additional					4
Group IV Electives		8	8	11	
Group V Physical Education	2	2	2	2	
Totals	34	32	33	33	26

[1] For a certificate in Pennsylvania this must include History 96.
[2] Includes teaching classes for Orthogenically Handicapped Children.

CURRICULUM FOR THE PREPARATION OF SCHOOL DENTAL HYGIENISTS*

Semester Credits

	Fresh. Year	Soph. Year	Junior Year	Senior Year	Grad. Year
Group I General Subjects					
English 102, 103, 130, 140, 20	5		6	3	
Foreign Language			6		
Science	6				
Social Studies[1]		3		3	
Additional from above or Mathematics			3		
Psychology 1			6		
Group II Professional Subjects					
Education D1		2			
Education 2			4		
Education 3b and 4b				5	
Education 650					2
Education 651					2
Education E541				2	
Education S5					10
Education S661 or Education E542					2
Psychology E3				3	
Group III Specialization					
Anatomy and Physiology	4				
Bacteriology	2				
Ethics and Economics		1			
First Aid and Safety		1			
General Hygiene and Public Health		1			
Health Education 410—Health Service in Schools				2	
Hygiene	1				
Manipulation of Dental Materials		2			
Odontography	4				
Oral Hygiene	10	10			
Oral Medicine and Pharmacology		2			
Orientation	1				
Political Science 2				4	
Psychology	2				
Public Health Dentistry		1			
Roentgenology		2			
Rotating Services		5			
Sociology 4 or 8, 22			2	4	
Related Work					10
Electives		2	2	2	
Physical Education			2	2	
Totals	35	32	31	30	26

[1] For a certificate in Pennsylvania this must include History 96.

* This curriculum is subject to revision.

CURRICULUM FOR THE PREPARATION OF WORKERS WITH THE BLIND[1]

Semester Credits

	Fresh. Year	Soph. Year	Junior Year	Senior Year	Grad. Year
Group I General Subjects					
Anthropology		4			
Economics[2]	3				
English 102, 103, 130, 140, and choices	6	8		2	
History 96 and choices	6	4			
Political Science 1			6		
Psychology 1		6			
Sociology 1 or 100, 22, and elective	3	4		4	
Group II Professional Subjects					
Education 1	2				
Education 2		4			
Education 3				7	
Education 650					2
Education 651					2
Education S680					2
Health Education 621					2
Home Economics	2				
Psychology E3			3		
Psychology 10			2		
Group III Specialization					
Education Ov 301			2		
Education Ov 320, Ov 420			4	4	
Education Ov 340			2		
Education Ov 440				2	
Education Ov 501				2	
Education Ov 5					10
Education Ov 535					2
Education Ov 536					2
Education Ov 550					2
Electives (in specialization)				6	2
Group IV Electives	9		12	5	
Group V Physical Education	2	2	2	2	
Totals	33	32	33	34	26

[1] Students enrolling in this curriculum must also be enrolled at the Overbrook School for the Blind. Application should be made to the Principal, Overbrook School for the Blind, Philadelphia 31.

[2] Economics 10 for women, Economics 3C or 2 for men. Credit to count for required and elective.

CURRICULA FOR THE PREPARATION OF VOCATIONAL TEACHERS

Vocational[1] Home Economics Teachers

Semester Credits

	Fresh. Year	Soph. Year	Junior Year	Senior Year	Grad. Year
Group I General Subjects					
Chemistry 1	6				
Economics		6			
English 102, 103, 130, 140	6	6			
Foreign Language	6				
Hygiene V2			2		
Microbiology 1			4		
Psychology 1		6			
Sociology 1			3		
Zoölogy 1			6		
Group II Professional Subjects					
Education 1	2				
Education 2		4			
Education 4				2	
Education 650					2
Education 651					2
Education S5					10
Education V520			4		
Education V521				4	
Education V522					4
Education V524					4
Education V525				4	
Psychology E3			3		
Group III Specialization					
Home Economics 1, 2	4				
Home Economics 4, 5, 6	6				
Home Economics 7, 8, 9		4⅔			
Home Economics 12				2	
Home Economics 13, 18, 23			4		
Home Economics 15			2⅔		
Home Economics 16, 17		4			
Home Economics 30				2	
Home Economics 34				3⅓	
Home Economics Electives				4⅔	4
Group IV Electives[2]	1		1	9⅔	
Group V Physical Education	2	2	2	2	
Totals	33	32⅔	32⅔	33⅓	26

[1] Students who wish a certificate to teach Home Economics rather than Vocational Home Economics should omit the courses in Vocational Education and take the courses in Education as listed in the Curricula for the Preparation of Secondary Teachers of Academic Subjects.

[2] For a certificate in Pennsylvania this must include History 96.

Shop and Related Subjects Teachers[1]

	Semester Credits			
	Fresh. Year	Soph. Year	Junior Year	Senior Year
Group I General Subjects				
Botany or Zoölogy	6			
Chemistry 1C or Physics 3C, 4C		6		
Economics 2C		4		
English 2C, 3C, 4C, 30C, 40aC, 40bC	6	6		
Hygiene V2			2	
Psychology 1			6	
Sociology 1C	4			
Group II Professional Subjects				
Education V1	4			
Education 2		4		
Education V5				6
Education V520	4			
Education V521			4	
Education V522			4	
Education V523			4	
Education V524			4	
Education V525				4
Education V526				2
Education V527				2
Education V528				2
Psychology E3C				3
Group III Specialization	8	12	4	5
Group IV Electives[2]			2	6
Group V Physical Education	2	2	2	2
Totals	34	34	32	32

A minimum of two years of approved work in a trade, or the equivalent, will be required for graduation.

[1] Teachers of metal and wood trades and the drafting trades will include among their specialization the following courses: M.E. 2, 12, 22, 95 and 96.

[2] For a certificate in Pennsylvania this must include History 96.

GRADUATE DIVISION

Admission

Admission to the Graduate Division of the School of Education is based on 1) graduation from an accredited four-year college, 2) a superior college record, and 3) the recommendation of the Personnel Committee. An interview with the Dean or Vice-Dean of the Graduate Division is required of all candidates for admission as classified students. Those who cannot submit credentials and have the interview before the opening of the term may be admitted as unclassified students. Their status will be changed when all requirements are met satisfactorily.

Credentials should be submitted six weeks in advance of the registration period in which the student desires to register. All new students must present a vaccination certificate properly signed by a physician.

THE DEGREE OF MASTER OF SCIENCE IN EDUCATION

Fields of Specialization

I. Elementary Education
   1. Classroom Teacher:
      a. Kindergarten-Elementary.....Prof. Laura Hooper
      b. Elementary.....Asst. Prof. Mary E. Coleman
   2. Administrative Officers:
      a. Kindergarten-Elementary Supervisor.....Prof. Laura Hooper
      b. Elementary Supervisor.....
      c. Supervisor of Developmental and Clinical Work in Reading.....} Assoc. Prof. Ralph C. Preston
      d. Elementary Principal.....

II. Secondary Education
   1. Classroom Teacher of:
      a. English.....Graduate Chairman
      b. French.....Prof. George O. Seiver
      c. Geography.....Prof. Lester E. Klimm

d. Germanics.....Prof. Alfred Senn
e. Industrial Arts.....Assoc. Prof. W. B. Jones
f. Italian.....Assoc. Prof. Domenico Vittorini
g. Latin.....Prof. Edward Heffner
h. Latin-American Specializations.Prof. E. D. Grizzell
i. Mathematics.....Dr. Bernard Epstein
j. Portuguese.....Asst. Prof. H. H. Carter
k. Science.....Asst. Prof. C. G. Stocker
l. Social Studies.....Vice-Dean McMullin (Fifth year students) and Prof. S. Howard Patterson (graduate students)
m. Spanish.....Prof. Otis H. Green
n. Vocational Education.....Assoc. Prof. W. B. Jones

2. Administrative Officers:

a. Counselor.....
b. Dean..... } Prof. R. D. Matthews
c. Department Head.....
d. General Supervisor..... } Asst. Prof. A. I. Oliver
e. Principal (Secondary School).....Assoc. Prof. Hugh M. Shafer
f. Principal (Latin-American Schools).....Prof. E. D. Grizzell
g. Supervisor of Industrial Arts.
h. Supervisor of Vocational Education..... } Assoc. Prof. W. B. Jones
i. Visiting Teacher.....Prof. R. D. Matthews

III. Special Fields—Teacher and Supervisor of:

1. Art.....Prof. P. C. K. Domville
2. Business Education.....Asst. Prof. W. L. Einolf
3. Health, Physical Education and Recreation..... Prof. F. W. Luehring and Prof. W. F. Meredith
4. Home Economics.....Assoc. Prof. W. B. Jones
5. Music.....Asst. Prof. J. L. Scott
6. Nursing
   a. Teacher in Schools of Nursing
   b. Administrator in Schools of Nursing..... } Prof. Theresa I. Lynch

7. Psychology
   - a. Exceptional Children.....
   - b. Cases of Defective Speech.....
   - c. Administration of Psychological Tests and Measurements

   } Asst. Prof. F. P. Bakes

8. Workers With The Blind.....Prof. R. D. Matthews

IV. General Administration

1. City Superintendent.....
2. County Superintendent.....
3. Supervising Principal.....

} Prof. W. E. Arnold and Assoc. Prof. Lee O. Garber

4. State Director or Supervisor.....Special Committee

The degree of Master of Science in Education is a professional degree as distinct from an academic research degree. It provides preparation for (1) teaching on the elementary and secondary levels, (2) supervisory services, (3) administrative responsibilities of the principal and superintendent, and (4) such other professional services in education as may seem desirable.

Admission of Students.—The holder of a baccalaureate degree from any college, university, or teachers' college approved by the regional accrediting associations *may, upon recommendation of the Personnel Committee, be admitted as a candidate for the degree of Master of Science in Education.* Those desiring admission as candidates for this degree should secure application blanks from the Dean of the School of Education. These blanks, properly filled out, together with transcripts of undergraduate records and vaccination certificates should be filed in the Dean's office, at least six weeks before the opening date of the term when the student plans to enter. *No student will be accepted as a candidate for the degree of Master of Science in Education until he is approved by the Personnel Committee. The admission of all students will be provisional for the first term or until approved by the Personnel Committee.* This approval is dependent upon an interview with the Dean or Vice Dean of the Graduate Division. Students *who do not file credentials as called for above* may be admitted as unclassified students. Unless a candidate submits credentials six weeks in advance of the opening date of the term no responsibility can be assumed in the matter of his scholastic eligibility. He may become a candidate for the degree of Master of Science in Education when satisfactory credentials have been presented. However, certificates of graduate credit will not be issued for work done by unclassified students until they have presented evidence showing they hold a baccalaureate degree from an accredited institution.

Course Requirements.—The number of semester credits required for the degree shall be determined upon the merits of each case. In no case shall this number be less than twenty-four. Few students will be able to secure the degree on this minimum. Twenty-four semester credits must be completed at the University of Pennsylvania and *not more than eight of them may be taken in University extension courses.* Students are urged to secure adequate preparation for the profession rather than meet minimum requirements for the degree. Before registering, each student should ask the Dean to assign him to an adviser who will arrange an individual plan of courses for him.

General Requirements.—Before being recommended for the degree of Master of Science in Education, each candidate shall present evidence of having fulfilled the following requirements:

A. Field of Specialization.

Thorough knowledge of the fundamentals of the field of educational service which the candidate has chosen as his special interest.[1] This knowledge shall be tested by a comprehensive examination conducted by the Group Committee giving instruction in this field or in such other way as the Group Committee shall determine. See "Examinations", page 65.

B. Additional Requirements.

1. Knowledge of instruments of measurements appropriate to the special field and the ability to administer and interpret them efficiently.

2. Knowledge of the methods, general and special, of teaching the subject selected, or knowledge of the principles underlying practice in the particular field of educational service chosen.

3. An understanding of the importance of educational research and an ability to interpret the results of such research in the special field.

4. An understanding of the place and function of that part of the educational system in which the service is to be rendered.

5. Evidence of two years of successful experience in a form of educational service appropriate to the field of specialization. See "Experience", page 66.

6. Evidence of the possession of a philosophy of education which is founded upon existing knowledge of human nature, the nature of

[1] Those interested in preparing to become classroom teachers will consult their advisers concerning the selection of courses in their major fields. These courses may be selected from those listed in the bulletin of the Graduate School of Arts and Sciences.

human society, and the educative process. See "Examinations", page 65.

7. Ability to organize courses of instruction in the special field of interest which are in harmony with current educational philosophy.

8. Ability to write with sufficient smoothness and clarity to satisfy the demands of the best educational magazines.

These requirements shall be considered not in terms of the completion of courses but as outcomes. In case any of these requirements has been fulfilled previous to beginning the course work, the candidate may be freed from taking certain courses, but this will not reduce the minimum number of semester credits for the degree.

THE RELATION OF COURSES AND OTHER EDUCATIONAL AGENCIES TO THE GENERAL REQUIREMENTS.—The courses listed below should prove helpful in aiding the candidate to meet the requirements outlined above. However, the requirements are to be considered as professional attainments by the candidate and not merely as lists of courses to be completed. The mere completion of a course will not necessarily insure the satisfaction of a requirement. Each candidate should keep in close contact with his adviser in his pursuance of the work for the degree.

Requirement A. Courses pertaining to the field of educational service which the candidate has selected as his specialization.

Requirement B1. Course in educational measurement.

Requirement B2. Courses in method, both general and special.

Requirement B3. Course in research (Education 655).

Requirement B4. To be judged by the instructor giving the course in curriculum.

Requirement B6. All of the candidate's formal education as well as all of his life experiences are likely to function in developing his personal, working philosophy of education. Education 651 and 652 have been organized to assist the individual in the integration of his experience to this end.

Requirement B7. Course on the curriculum.

Requirement B8. Term papers for courses and other written work of the candidate. For deficiencies, appropriate courses given by the Department of English may be advisable.

EXAMINATIONS.—Requirement A (p. 64). The examination in the field of specialization chosen by the candidate is conducted by the Group Committee giving instruction in that field.

Those who are preparing to become teachers of some special subject, such as English or mathematics, will receive the examination from the corresponding department, i.e., the English, mathematics, or other department (except those indicated in the paragraph below), and must make individual arrangement with the department for the examination. The candidate may consult with his adviser concerning these arrangements.

Those who are preparing for positions other than the above, such as elementary school teacher, secondary school department head, guidance counselor, teacher and supervisor in the vocational field, superintendent of schools, teacher of science, teacher of business subjects, supervisor and teacher of music, and other similar positions may take the examination in the special field on July 24, 1951, January 5, 1952, or May 10, 1952, at one-thirty o'clock. To be admitted to this examination the student must register for it on or before July 10, 1951, December 15, 1951, or April 19, 1952, respectively, at 203 Eisenlohr Hall. At the time of registration the student will receive an examination number and notice of the place where the examination will be held.

2. Requirement B6 (p. 64) involves a two-hour written examination of the objective type. This examination may be taken *for diagnostic purposes* by any student who has completed or will have completed by the end of the current term, twelve semester credits of graduate work. It is open *for credit* to any student who has completed or will have completed by the end of the current term, eighteen semester credits of graduate work. This examination will be given on July 25, 1951, January 12, 1952, and May 17, 1952, at one-thirty o'clock. To be admitted to this examination the student must register for it on or before July 10, 1951, December 15, 1951, or April 10, 1952, respectively, at 203 Eisenlohr Hall. At the time of registration the student must indicate whether he is taking it for credit or for diagnostic purposes. Upon registration he will receive an examination number and notice of the place where the examination will be held.

A list of the topics, with references, which forms the basis of the examination, is available to candidates to assist them in preparing for the examination. This list may be obtained at 203 Eisenlohr Hall upon payment of a small charge to cover the cost of mimeographing.

Experience.—Requirement B5 (p. 64) may be met in the following ways:

1. Candidates with teaching experience may meet this requirement by presenting satisfactory evidence of two years of successful *full-time* experience.

2. Candidates who are graduates of the Five Year Program of the School

of Education of the University of Pennsylvania will be considered to have satisfied this requirement by their supervised student teaching experience.

3. Candidates who hold valid state certificates to teach and who desire to extend these certificates for a different level may arrange to satisfy this requirement by the satisfactory completion of Education E6 or S6.

4. Candidates who do not hold valid certificates to teach but who have received a bachelor's degree from an accredited college or university will be permitted to satisfy this requirement through supervised student teaching, providing they complete, in addition, all other requirements of the Five Year Program.

Limitation of Time.—A maximum of six calendar years will be allowed for the completion of the work for this degree. Candidates who have not, in their undergraduate work, completed advanced courses in the subject-matter underlying their field of specialization and in the fundamental courses in Education will find it impossible to complete the requirements for this degree in one year of full-time residence.

Specialization.—Specialization is in a field of service rather than in a subject. It may be in the teaching of a specific subject in the secondary school; teaching in the elementary school, or special classes; general or special supervision; administration or any other field of educational activity.

Courses.—Courses listed in this announcement, the announcement of the Graduate School of Arts and Sciences, and in the Summer School announcement as carrying graduate credit, may count toward the degree of Master of Science in Education if the choice of courses is included in the program planned for the student.

In addition to the general course requirements as stated above some of the departments have set up special requirements for specialization. These special requirements follow.

THE TEACHING OF BUSINESS SUBJECTS

a. Graduates of the School of Education who have as undergraduates specialized in business subjects will be required to complete fifteen semester credits of graduate work as follows: (1) two semester credits in Curriculum Construction in Business Education, (2) two semester credits in Unit Planning in the Social-Business Subjects, (3) two semester credits in Consumer Economic Education, (4) two semester credits in Problems in Business Education, (5) seven semester credits of electives in social studies and/or special methods in business subjects.

b. All other students will be required to (1) give evidence of satisfactory completion of courses in Economics, Political Science, Sociology, History, Economic Geography, and Business Law; (2) give evidence of proficiency in Accounting, Marketing and Merchandising, Secretarial, or General Clerical subjects; (3) complete fifteen semester credits of graduate work as indicated in *a*.

PREPARATION FOR COUNSELING

Graduate students interested in preparing for positions in guidance service may take work in a coordinated program in the School of Education, the Graduate School of Arts and Sciences, and the Pennsylvania School of Social Work. The program recommended for counselors includes Ed. S680 and S681, Principles and Administration of Guidance; Psych. 559 and 530, Clinical Tests and Measurements and the Clinic; Social Work 505, 504, and 501, Counseling Techniques and Interview and Social Case Work; Ed. 621, Vocational Education; Ed. V523, Modern Industries and Industrial Relations; V529, Occupations; V530, Vocational Guidance; Ed. 660, Educational Measurements; Sociology 630 and 631, Sociology of Child Development; Psych. 554, Psychological Techniques for the Selection and Classification of Personnel; and Ed. S662 and S682, Activities Program of the Secondary School and Home Room.

THE TEACHING OF ENGLISH

a. All students other than graduates of the School of Education who as undergraduates specialized in English will be required to present evidence of a satisfactory background of undergraduate courses in English. When a student's background is insufficient, the graduate chairman of the Department of English may prescribe undergraduate or graduate courses in addition to those required under *b*.

b. All students will be required to take at least twelve semester credits in English. Of the required credits, two are to be taken in English 600. The remainder should be well distributed among the various subdivisions of the whole field of English and American literature.

THE TEACHING OF FOREIGN LANGUAGES

Students specializing in a foreign language must show preparation equivalent to that required in the undergraduate program of the School of Education for specialization in the particular field. They will be required to complete a minimum of twelve semester credits of graduate work in their special field as follows:

a. GERMANICS.—Twelve semester credits distributed between literature and languages. A list of required and recommended readings is available at the office of the Department. Candidates must show a speaking knowledge of the language.

b. LATIN.—Twelve semester credits including at least four in language, four in literature, and four at large, selected to constitute a program best calculated to meet the needs of the individual student.

c. ROMANCE LANGUAGES.—A minimum of twelve semester credits distributed between literature and languages. A reading list may be obtained at the office of the Department. Candidates must show a speaking knowledge of the language chosen.

THE TEACHING OF GEOGRAPHY

a. Graduates of the School of Education who have as undergraduates specialized in Geography will be required to complete (1) a minimum of eight semester credits in Geography, and (2) four semester credits in Geology, Anthropology, or Economics. Economics 930 (Philosophy of Geography) should be taken if possible.

b. All other students will be required to present evidence of competence in the fundamentals of Geography and related subjects, such as will be equivalent to that required of undergraduates of the School of Education specializing in the Teaching of Geography, in addition to those required under *a*.

THE TEACHING AND SUPERVISION OF HEALTH, PHYSICAL EDUCATION AND RECREATION

a. Graduates of the School of Education who have specialized in their undergraduate work in health and physical education will be required to complete a minimum of twelve semester credits including one course each in mental hygiene, health education, tests and measurements in health and physical education, administration, and two additional courses in health and physical education.

b. All other students will be required to show satisfactory completion of courses, either undergraduate or graduate, in personal and community hygiene; anatomy, physiology, bacteriology, and zoology; interpretations and objectives of health and physical education; and administration of health and physical education in addition to those required under *a*.

c. In order to be recommended for the degree, the student must pass

satisfactorily a comprehensive examination in Health, Physical Education and Recreation.

THE TEACHING OF MATHEMATICS

a. Graduates of the School of Education who as undergraduates have specialized in mathematics will be required to complete twelve semester credits of graduate work chosen from the fields of mathematics, physics, chemistry, astronomy, and philosophy. It is preferred that all of these credits be in mathematics; at least nine must be.

b. All other students must (1) present evidence of satisfactory completion of courses in differential and integral calculus, (2) complete at least six semester credits in mathematics beyond calculus with a grade of at least B, or show that they have already done so, in addition to the courses required under *a.*

c. In order to be recommended for the degree, the student must pass satisfactorily a comprehensive examination in Mathematics.

THE TEACHING AND SUPERVISION OF MUSIC

a. Graduates of the School of Education, who as undergraduates have specialized in Music Education, will be required to complete twelve semester credits of graduate work as follows: (1) 2 or 4 s. c. in the teaching of music in the elementary school, (2) 2 s. c. in the teaching of general music in the secondary school, (3) 2 s. c. in the teaching of vocal music, (4) 2 or 4 s. c. in the teaching in instrumental music, and (5) 2 s. c. in the principles and problems of Music Education.

b. All other students, in addition to meeting requirements stated under *a.*, will be required to present evidence of satisfactory attainment in the following: (1) ability to present major performance on piano, voice, or symphonic instrument; (2) ability to perform school and community songs on the piano; (3) ability to sing easy folk and art songs with good intonation, voice-quality, and diction; (4) ability to play simple melodies, scales, and rhythms on the violin, trumpet, clarinet, and snare drum; (5) ability to harmonize simple melodies at the keyboard; (6) ability to read (vocally) at sight, school music materials; (7) knowledge of harmony, and ability to analyze the harmonic structure and form-design of school music materials; (8) ability to conduct vocal and instrumental groups.

PSYCHOLOGY—The Administration of Psychological Tests and Measurements; the Teaching of Exceptional Children; the Training of Cases of Defective Speech

a. Graduates of the School of Education, who as undergraduates have specialized in Psychology, will be required to complete from twelve to eighteen semester credits of graduate work depending upon (1) degree of proficiency in the general field of Psychology; (2) ability to interpret the results of experimental procedures; (3) success in planning experimental attacks on simple problems in those divisions of Psychology having definite relation to Education; (4) ability to employ techniques in the analysis, diagnosis and diagnostic teaching of exceptional children, or in the diagnosis and training of cases of defective speech.

b. All other students will be required to show that they have satisfactorily reached the attainment of a graduate of this School of Education specializing in Psychology, before they will be permitted to proceed under the program set forth under *a*. The courses required to reach this level of proficiency, however, may be taken for graduate credit except Psychology 1, E3 and 34.

c. In order to be recommended for the degree, the student must pass satisfactorily a comprehensive examination in the particular field of Psychology.

THE TEACHING OF SCIENCE

Students specializing in The Teaching of Science must have completed the work prescribed for the undergraduate specializations in Science in the School of Education or its equivalent. The graduate work should be selected under the guidance of Dr. C. G. Stocker and a member of the science department, or departments, in which the student wishes to work. A minimum of twelve semester credits must be acquired in graduate courses in Science. The attainment of the candidate will be tested by a comprehensive examination in the field of Science.

THE TEACHING OF SOCIAL STUDIES

1. *Prerequisites.* It is expected that each student will have had undergraduate or graduate courses in Early European History, Modern European History, and American History, and at least one course in each of the three basic social sciences; namely, Economics, Sociology, and Government or Political Science. Previous courses in English History or Latin America and in Anthropology or Geography are desirable, but they are not required.

2. *Deficiencies.* Students not having had adequate work in each of these three basic fields of history and in each of these three fundamental social sciences, if admitted as majors in social studies, must take courses, graduate or undergraduate, in the fields not previously covered.
3. *Content Requirements.* A minimum of twelve semester credits of graduate work in content is required. These graduate courses must include at least one course in History and courses in at least two of the three following fields; namely, Economics, Sociology, and Political Science. The adviser may permit substitution of either Anthropology or Geography for one of these three social sciences.
4. *Satisfaction of Content Requirement.* This is by review by the adviser of the student's record in graduate content courses and not by a comprehensive examination as is required for the professional work in Education. An average of at least B grade in graduate content courses is required of those who present the minimum of twelve semester credits therein. Regardless of the number of graduate credits in content courses, no student who fails to achieve an average higher than a grade of C therein will be recommended for the degree of Master of Science in Education.
5. *Procedure.* Regular advising hours for conference and registration are maintained during the opening weeks of the Fall and Spring terms for those students who have been admitted to the School of Education and accepted by the Social Studies Division. After securing information about available content courses from the appropriate departments of instruction, students should confer with their adviser, who will sign their cards listing the courses elected.
6. *Professional Work in Education.* These courses are outlined and this work is supervised by the School of Education, which administers the final comprehensive examination therein. Approximately one half of the student's work is of this character.
7. *Content Course Offerings.* These are contained in the catalogues of the Graduate School of Arts and Sciences and the various undergraduate schools. The social science departments issue a composite mimeographed list of graduate courses currently offered in Economics, Political Science and Sociology. It is more accurate than the fuller and earlier descriptions contained in the catalogue.
8. *Basic Graduate Course in Economics* is Economics 600, Economic Theory, full year only, given Saturday 11-1.

DEGREE OF DOCTOR OF EDUCATION

The degree of Doctor of Education is designed to provide advanced professional preparation for individuals with superior qualifications for administrative and supervisory positions. The objectives of the degree differ from those of the degree of Doctor of Philosophy[1] in that emphasis is placed upon professional competence rather than upon research. While the qualitative standards of scholarship for both degrees are the same, the candidate for the degree of Doctor of Education is expected to demonstrate ability to make effective application of his knowledge to practical professional situations.

Fields of Specialization

1. College Administrator
2. Director of Guidance
3. Director of Teacher Education
4. Director of Vocational Education
5. Elementary School Principal
6. Secondary School Principal
7. Superintendent of Schools
8. Supervisor of Elementary Education
9. Supervisor of Health and Physical Education
10. Supervisor of Music Education
11. Supervisor of Secondary Education
12. Supervisor of Special Education

Requirements

The Committee on the Degree of Doctor of Education is in charge of the administration of all requirements for the degree. This committee shall pass upon the admission of the student to candidacy for the degree; appoint a committee of the faculty to supervise his work; and administer the necessary examinations.

The process of obtaining the degree of Doctor of Education is as follows:

I. Admission to Graduate Standing.—The Personnel Committee of the School of Education may admit graduates of approved institutions of collegiate rank to graduate standing.

II. Admission to Candidacy.—The Committee on the Degree of Doctor of

[1] The program leading to the degree of Doctor of Philosophy with a major in Education is administered by the Graduate School of Arts and Sciences.

Education may admit a student to candidacy when it has satisfied itself with respect to his general qualifications including the following:

1. The student, in addition to being a graduate of an approved institution of collegiate rank, shall present evidence of adequate cultural attainments.
2. The student's previous professional preparation shall include a master's degree in education or its equivalent, and successful practice in some professional field.
3. The student shall have serious intentions of qualifying himself for a definite administrative or supervisory position.
4. The student shall have suitable personal and social qualities.

In addition to evidence of the student's qualifications as listed above, he is required to take such written examinations as the Committee may deem necessary. These examinations will be given July 10, 11, 12, 1951; October 13, 20, 27, 1951; and February 9, 16, 23, 1952. For announcement of time and place, applicants for admission to candidacy should communicate with the Secretary of the Committee on the Degree of Doctor of Education, Room 203, Eisenlohr Hall. The Committee will meet to pass upon applications for admission to candidacy on July 26, 1951; November 9, 1951 and March 7, 1952.

III. The Candidate's Committee.—After the Committee on the Degree of Doctor of Education has admitted the student to candidacy, it will designate a Candidate's Committee consisting of not less than three members representing areas appropriate to the candidate's field of specialization. The Candidate's Committee operates as follows:

1. It is responsible for approving the candidate's program, for directing his work, and for determining his fitness for specialization.
2. It may refer the candidate back to the Committee on the Degree of Doctor of Education on evidence of lack of suitable qualifications.
3. Before recommending to the Committee on the Degree of Doctor of Education, that the candidate be admitted to final examinations, it will satisfy itself that he possesses the following qualifications:
   a. A broad knowledge of educational theory and practice. (See Examinations, page 76.)
   b. Intensive knowledge and understanding of the area of specialization. (See Examinations, page 76.)
   c. Personal and social qualities suitable to effective service in the field of specialization.

d. Adequate mastery of the technical skills needed in solving professional problems in the candidate's area of specialization. These may include statistical analysis, reading or speaking of foreign languages, or any other appropriate and necessary techniques of investigation.

e. Ability in speaking, appropriate to the candidate's area of specialization; ability to prepare reports required in the candidate's position; and ability to prepare professional manuscripts suitable for publication in the best educational journals.

f. Professional competence in the field of specialization as demonstrated by: (1) A formal written report covering the study of a professional problem in the field of specialization. This report shall appear in such form and conform to such standards as the Committee on the Degree of Doctor of Education shall specify; two copies of it shall be deposited in Penniman Library. (2) Practice in an actual situation in the area of specialization, supervised and judged by the Candidate's Committee.

IV. Course Requirements.—The candidate shall complete a total of at least 60 semester credits of approved graduate work, distributed as follows:

1. At least 52 semester credits of specialization and general course work.
2. Not less than 4 nor more than 8 semester credits in a seminar.
3. At least 24 semester credits of work taken at the University of Pennsylvania, and at least 12 semester credits taken during one calendar year.

V. Admission to Final Examination.—(See Examination, page 76.) The Candidate's Committee will report to the Committee on the Degree of Doctor of Education when the candidate has met all requirements. The latter Committee, if satisfied, will authorize the administration of a final examination to be conducted by a committee of seven. The committee shall be composed of:

1. The chairman of the Candidate's Committee.
2. One representative from the Committee on the Degree of Doctor of Education.
3. Five members appointed by the Dean from the graduate division of the faculty of the School of Education.

At the discretion of the Examining Committee the candidate will be rec-

ommended to the Executive Committee of the School of Education for the Degree of Doctor of Education.

Prior to the examination, a digest of the candidate's qualifications shall be prepared and distributed to the members of the Examining Committee.

Examinations—III, 3, a. A broad knowledge of educational theory and practice. This objective is measured by an objective examination of approximately five hours in length. The candidate is admitted to the examination upon the recommendation of the chairman of his committee. This examination will be given on January 12, 1952, and May 17, 1952. The examination is divided into two parts beginning at 9 A. M. and 1:30 P. M. respectively. To be admitted to this examination the candidate must, in addition to securing the recommendation of the chairman of his committee, register for it on or before December 15, 1951, or April 19, 1952 respectively, at 203 Eisenlohr Hall.

III, 3, b. Intensive knowledge and understanding of the area of specialization. This objective is measured by a written examination prepared by the candidate's committee. The candidate is admitted to the examination upon recommendation of the chairman of his committee. This examination will be given on January 5, 1952, and May 10, 1952. The examination is divided into two parts, beginning at 9 A.M. and 1:30 P. M. respectively. To be admitted to this examination the candidate must, in addition to securing the recommendation of the chairman of his committee, register for it on or before December 15, 1951, or April 19, 1952 respectively, at 203 Eisenlohr Hall.

VI. The final examination. This is an oral examination of approximately one and one-half hours in length. At least one term must elapse between the passing of the two examinations described above and the taking of the final examination. The exact time and place of this examination are determined by the candidate, the chairman of the candidate's committee, and the Dean of the School of Education.

SUBJECTS OF INSTRUCTION IN THE FIVE YEAR PROGRAM AND THE GRADUATE DIVISION OF THE SCHOOL OF EDUCATION

The following courses are of special interest to students in the Five Year Program and the Graduate Division of the School of Education. They are open to students in other divisions of the School of Education. For additional undergraduate courses men students should consult the bulletin of the College and of the Wharton School of Finance; women students should consult the bulletin of the College of Liberal Arts for Women. Both should consult the bulletin of the School of Fine Arts and of the College Collateral Courses. For additional graduate courses students should consult the bulletin of the Graduate School of Arts and Sciences.

Courses numbered from 1 to 499 inclusive are undergraduate, those numbered from 500 to 599 may be taken for either undergraduate or graduate credit, and those numbered 600 or above are strictly graduate.

ACCOUNTING

E1. Elementary Accounting. Both terms. No credit for one term only. 3 hrs. a wk. 6 s. c. McAllister.

History of accounting; accounting equation; principles of debit and credit; trial balance, work sheet, balance sheet, and profit and loss statement; adjusting and closing the books; columnar records; control accounts; capital and revenue; business instruments; depreciation; partnership and corporation accounting; individual federal income tax.

E2. Advanced Accounting. Both terms. No credit for one term only. 3 hrs. a wk. 6 s. c. Prerequisite, E1. Accounting Staff.

A continuation of the study of accounting principles, including income determination; valuation; voucher system; manufacturing accounts; corporation accounting partnership accounting; accounting statements; analysis and interpretation of accounting data and budgeting.

ART

Adviser: Prof. Domville, Fine Arts Studio, Hamilton Walk.

Students specializing in the teaching of Fine Arts will follow the curriculum outlined on page 49. Courses numbered 600 or above are on the graduate level.

4. Survey of the History of Art. Fall or Spring term. Either term may be taken for credit. 3 hrs. a wk. 6 s. c. Robb and Smith.

A general historical and aesthetic study of art epochs, artists and the changing traditions in paintings, architecture, sculpture, and minor arts.

5. Modern Art. Fall or Spring term. 2 hrs. a wk. 4 s. c. Prerequisite, FA 4 or permission of instructor. Robb.

A survey of the evolution of modern style in painting and sculpture, with particular emphasis on the contemporary period. Either term may be taken for credit.

7. Art of the Renaissance in Italy. Fall or Spring term. Either term may be taken for credit. 2 hrs. a wk. 4 s. c. Robb.

The evolution of the Renaissance viewpoint in painting and sculpture from the fourteenth through the seventeenth centuries.

111a&b. Freehand Drawing. Both terms. 4 hrs. a wk. 4 s. c. Studio Staff.

Basic study of form and its representation in line and the relationship of light, form and value in representing the third dimension.

211a&b. Freehand Drawing. Both terms. 4 hrs. a wk. 4 s. c. Studio Staff.

Charcoal drawing stressing design and composition in ornament and still life. Prerequisites, FA 111a&b.

213a&b. Freehand Drawing. Both terms. 4 hrs. a wk. 4 s. c. Studio Staff.

Study of the head from the cast.

311a&b. Freehand Drawing. Both terms. 4 hrs. a wk. 4 s. c. Studio Staff.

Study of the human figure from the cast.

313a&b. Anatomy. Both terms. 1 hr. a wk. 2 s. c. House.

Study of the skeletal and motor anatomy as necessary to the artist. 1 hr. lecture and 2 hrs. preparation a wk. To be taken concurrently with FA 311.

411a&b. Drawing from Life. Both terms. 4 hrs. a wk. 4 s. c. Domville and Palanica.

413a&b. Modelling. Both terms. 4 hrs. a wk. 4 s. c. House.

210. Water Color. Each term. 4 hrs. a wk. 2 s. c. Studio Staff.

Exercises in the handling of monochrome water color.

212. Water Color. Each term. 4 hrs. a wk. 2 s. c. Studio Staff.

Exercises in color theory and elementary painting.

314a,b&c. PAINTING. Three terms. 4 hrs. a wk. 2 s. c. per term. Studio Staff.

Oil and water color painting.

412a,b&c. PAINTING. Three terms. 4 hrs. a wk. 2 s. c. per term. Studio Staff.

Advanced oil and water color painting.

414a&b. COLOR AND DESIGN. Both terms. 6 hrs a wk. 6 s. c. PALANICA.

The study and practical application of the elements of color and design for art teachers.

126a&b. GENERAL GRAPHICS. Both terms. 3 hrs. a wk. 4 s. c. BAUMEISTER.

For non-technical students, emphasizing instrumental drawing and lettering including graphical geometric description by means of projections; technical drafting; graphic solution of space problems.

539. THE ART OF LATIN AMERICA. Both terms. 2 hrs. a wk. 4 s. c. Room 10, Fine Arts Building. SMITH.

A general course in the history of Central and South American art. Lectures, assigned reading and research.

540. AMERICAN ART. Both terms. W. 2-4. 2 hrs. a wk. 4 s. c. Room 10, Fine Arts Building. SMITH.

American architecture, painting, etc., of the 18th and early 19th centuries. Particular stress will be laid on material available for study in and around Philadelphia.

631. DRAWING FROM LIFE. Both terms. M., Th. 7-9 P. M. 4 s. c. Fine Arts Building. DOMVILLE.

632. OIL OR WATER COLOR PAINTING. Both terms. S. A. M. or arrange hours with professor. 4 or 6 s. c. Fine Arts Studio. DOMVILLE and COLAROSSI.

635. TECHNIQUES AND EXPRESSION. Both terms. 4 s. c. May be taken in one term for 4 s. c. DOMVILLE.

Graduate course in Fine Arts offered to those students in Graduate Education who can qualify for the work. See Fine Arts Bulletin.

Graduate courses in History of Art to be announced. Content but not s. c. value of courses in Art History (excepting F.A.4) subject to change. Consult School of Fine Arts Bulletin for 1951-1952.

BOTANY

Adviser: Assoc. Prof. D. W. Steckbeck, 25 Macfarlane Hall.

Students specializing in the teaching of science with a major interest in Botany should follow the curriculum for the preparation of science teachers as outlined on pages 46, 47. They should complete Botany 1, and 2 s. c. from the exclusively undergraduate courses in Botany before entering upon graduate Botany courses.

BUSINESS LAW

E1. Business Law. Both terms. 3 hrs. a wk. 6 s. c. Dr. Skilton.

Legal principles involved in business transactions. Nature and function of law, its place in the economic order; enforcement of legal rights; law of business agreements, agency, and a selection from the following topics: sales, negotiable instruments, business associations, trade practices.

CHEMISTRY

Adviser: Assoc. Prof. Harry A. Alsentzer, Jr., Room 219, Harrison Laboratory of Chemistry.

Students specializing in the teaching of science with a major interest in Chemistry should follow the curriculum for the preparation of science teachers as outlined on pages 46, 47. They should complete Chemistry 1, 3, 6, 8, 11, and 2 s. c. chosen from 26, 102, 124, and 131.

ECONOMICS

2. General Economics. Fall term—Economic Principles. Spring term—Economic Problems. 3 hrs. a wk. 6 s. c. Prerequisite, Sophomore standing. Loucks and Staff.

Fundamental course for students expecting to major in economics or social-business subjects.

10. Economic Institutions and Organization. Fall or Spring term. 3 hrs. a wk. 3 s. c. Patterson and Staff.

A descriptive course for Freshmen; upper classmen are admitted only after consultation with the instructor or permission of the Dean. Coordinated with Sociology 1.

EDUCATION

The courses in Education are listed under General, Administration, Art, Business, Elementary (including Kindergarten), Fine Arts, Higher, History, Music, Overbrook, Secondary, and Vocational. The letter prefixed to a course number refers to one of these divisions. When no letter is prefixed,

the course is general. Courses numbered 1 to 499 inclusive are strictly undergraduate, 500 to 599 inclusive, may be taken for either undergraduate or graduate credit, and those numbered 600 or above are strictly graduate. *All courses in Elementary Education numbered between 1 and 199 and Education 3, 4, 650, 651, E3, E6, S5, S6 and S661 are open to students in the School of Education.*

General

1. Introduction to Education. Fall or Spring term. Open only to Freshmen and Sophomores. 2 hrs. 2 s. c. Collins, Gruber and Sneath.

An orientation course planned to assist students to acquire a better understanding of the requirements of teaching as a profession in order to determine whether or not they should begin preparation for that profession.

2. Education and Social Evolution. Fall and Spring terms. 2 hrs. 4 s. c. Woody and Mulhern.

The evolution of educational thought and practice, with particular attention to their interrelation with economic, social, religious, and political factors, from primitive to modern times, with stress on the social significance of educational institutions.

3a and 3b. Principles and Practices of Education. Fall and Spring terms. Open only to Juniors, Seniors, and Fifth Year Students in the School of Education. Prerequisite, or concurrent: Psychology E3. 3a, 3 hrs., 3 s. c. 3b, 4 hrs., 4 s. c. Huus, Maw, and McMullin.

3a. The nature of the learner and the nature of the learning process.

3b. The direction of learning activities and the evaluation of the results of learning.

One section of 3b is offered in the fall term and one section of 3a in the spring term. All other sections of 3a come in the fall term and all other sections of 3b in the spring term. 3a must precede 3b.

4a and b. Observation. Fall and Spring terms. 1 hr. 2 s. c. Stocker.

Observation and classroom procedure in conjunction with 3. One hour discussion and two hours observation per wk.

525. Workshop and Field Work in Education.

526. Visual and Sensory Techniques. Fall term. Tu. 4.30-6.30, Th. 6.30-8.30. Spring term. Tu. 4.30-6.30 or Th. 4.30-6.30. 2 s. c. Shafer.

Function of the senses in the learning process. Pictorial and other sensory aids in instruction. Projection apparatus. Sources of slides, films and other sensory aids.

526L. Visual and Sensory Techniques Laboratory. Spring term. Tu. 6.30-8.30. Prerequisite or concurrent, 526 or equivalent. 1 s. c. Shafer.

Supervision of activities connected with the operation, care and use of appropriate instructional aids equipment and materials.

530. Diagnosis and Correction of Reading Disabilities. Fall term. Th. 4.30-6.30. 2 s. c. Preston.

Analysis of causes of reading disabilities of pupils from primary grades through college; types of treatment currently used to overcome these disabilities. Clinical experience provided. Fee for materials $2.00.

540. The Radio and Education. Fall term. Tu. 4.30-6:30. 2 s. c. Gruber and Miller.

A survey of radio in America and abroad, its organization, techniques, and application to education. Lecture, discussion, demonstration, observation, and practice in downtown radio stations.

541. The Radio in Education. Spring term. Tu. 4.30-6.30. 2 s. c. Gruber and Miller.

General methods, materials, and equipment of Radio in Education. Administration and supervision of radio activities in schools. Lectures, discussions, demonstrations, observations, and practice in downtown radio stations.

545. Evaluation and Preparation of Educational Radio Scripts. Spring term. S. 11-1. 2 s. c. Gruber.

Critical evaluation of current radio scripts for educational broadcasting. Preparation of several types of scripts in various subject-matter fields and on different grade levels.

550. The Organization and Administration of Education. Fall term. W. 4.30-6.30. Spring term. S. 11-1. 2 s. c. Arnold and Garber.

The structure of the public school organization on the federal, state and local levels. Current problems of financing and administering programs of education. This course is designed primarily for teachers and others than majors in Administration.

621. Principles of Vocational Education. Fall term. Tu. 4.30-6.30, or Spring term F. 4.30-6.30. 2 s. c. Hankin.

Philosophy and function of vocational education for the school administrator and the school counselor. Pertinent aspects of vocational education, including relationships with general education, vocational guidance, and industrial arts.

626. Problems in Instructional Aids. Fall term. F. 4.30-6.30. Prerequisite, Ed. 526 or equivalent. 2 s. c. Shafer.

Experimentation and other types of research connected with the solution of educational problems in the area of instructional aids.

630. Clinical Work in Reading. Prerequisite, Education 530. Spring term. Tu. 4.30-6.30 and hours to be arranged on individual basis. 2 s. c. Bond.

Supervised practical experience in diagnostic and remedial procedures. Fee for materials $2.00.

650. Teachers' Relation to School and Community. Prerequisite, 3 and 4. Fall or Spring term. M. 10-12 or M. 2-4. 2 s. c. Garber.

Duties, certification, appointment contracts, tenure, promotion, dismissal, rewards, and in-service training of teachers. Codes of ethics. Teacher relationships to administrative agencies, instructional supplies and equipment, and to general working conditions.

651. Philosophy of Education. Prerequisites, 3 and 4. Fall or Spring term. Tu. 10-12. Fifth-year students only. 2 s. c. Mulhern.

A study of the contribution of educational philosophers to the solution of basic educational problems.

652. Philosophy of Education. Fall and Spring terms. Tu. 10-12 or S. 9-11. 4 s. c. Gruber.

The implications of knowledge of human nature for the development of the individual in relation to society; the place of education in this development.

655. Interpretation of Educational Research. Fall term. Th. 6.30-8.30 or S. 11-1. Spring term. Th. 10-12 or Th. 4.30-6.30 or S. 11-1. 2 s. c. Garber, Mulhern and Tate.

The purpose of this course is to enable the student to interpret and evaluate research work.

656. Adult Education. Fall term. M. 4.30-6.30. 2 s. c. Garber.

An examination of aims and practices in adult education in light of needs and abilities.

658. Statistics in Education. Both terms. F. 4.30-6.30. 4 s. c. Tate.

Statistical concepts and procedures which find appropriate use in school administration, supervision and instruction. The computation and interpretation of statistical quantities. Prerequisite, a course in educational measurements.

659. Evolution of Democratic Educational Philosophy. Both terms. S. 11-1. 4 s. c. Woody.

The purpose is to discover the origin and trace the development of the central concepts involved in an educational philosophy suitable to democratic society, and to formulate such a philosophy.

660. Educational Measurements. Fall or Spring term. W. 4.30-6.30 or S. 11-1. 2 s. c. Castetter and Tate.

Principles of evaluation; validity and reliability of measures; the construction of instruments; and the utilization of results.

691. The Supervision and Improvement of Instruction. Fall term. S. 11-1. 2 s. c. Arnold.

Basic general course in supervision, including the nature, principles, agencies and general techniques of supervision; evaluation and analysis of the work of the supervisor.

800. Introduction to Educational Research. Both terms. S. 9-11. 4 s. c. Tate.

Required of all candidates for the Master of Arts degree.

950. Field Practice for Doctor of Education Degree. Under the direction of the Candidate's Committee. 4 to 6 s. c.

To be taken only by candidates who have had no practical experience in the field of specialization. Registration only with consent of Candidate's Committee.

Administration

A520. Problems of the Elementary School Principal. Both terms. W. 4.30-6.30. 4 s. c. Arnold and Huus.

A comprehensive analysis of the work of the elementary school principal with special emphasis upon the practical aspects.

A650. School Administration. Both terms. S. 9-11. 4 s. c. Garber.

An examination of the controlling principles and prevailing practices in the organization and administration of public education.

A652. The Business Administration of School Systems. Both terms. S. 9-11. 4 s. c. Arnold.

Emphasis on practical problems of business management.

A654. Planning, Construction and Equipping of School Buildings. Spring term. S. 11-1. 2 s. c. Arnold.

Planning building programs; preliminary surveys; selection of architects; building contracts; financing; building and equipment specifications.

A657. Public School Relations. Spring term. M. 4.30-6.30. 2 s. c. Garber.

A study and evaluation of the instruments and techniques employed to secure the continuing cooperation of the community in developing the educational program.

A660. Public School Finance. Fall term. S. 11-1. 4 s. c. Garber.

Sources of school revenues; school finance as related to public finance; existing and proposed plans of school support; taxation.

A900. Seminar in Educational Administration. Both terms. F. 6.30-8.30. 4 s. c. Arnold.

For candidates for doctorate degrees.

Art Education

AE1. Arts and Crafts. Fall term. Tu. 4.30-6.30. 2 s. c. Miss Bertolette.

A series of simple problems in the various crafts suited to the needs of teachers of school art.

AE3. Technique of Art. Spring term. M. 3-5 and W. 2-4. 2 s. c. Miss Bertolette.

The purpose is to equip the prospective teacher with the knowledge, appreciation and ease of expression necessary to carry on the work in drawing, design and color in the kindergarten and grades. Subjects, methods, and materials are considered. Practice is given in water color painting, colored paper, crayon, soft pencil, chalk and charcoal.

AE4. History and Appreciation of Art. Spring term. M. 9-11. 2 s. c. Miss Bertolette.

The role of art in the development of civilization is considered. The great periods are studied and through familiarity with a few of the best examples of these the student may acquire a knowledge of the characteristics of each, which will enable her to recognize other representatives of the period. Of special interest to elementary teachers.

Business

Adviser: Asst. Prof. W. L. Einolf, 3810 Walnut Street.

Students intending to prepare for service in the field of Business Education should follow the curriculum as outlined on pages 50, 51.

B20. Junior Business Training. Both terms. M. 4.30-6. 3 s. c. Einolf.

Aims and functions of business education on the early secondary school level; diagnosis and remedial instruction in fundamental processes; content, collateral materials and community aids; student activities and class room procedures.

B21. Business Mathematics. Both terms. Tu. 4.30-6. 3 s. c. Einolf.

Organization, objectives, diagnosis, and remedial instruction on the early secondary school level; content, vocational values, methods, and standards on the upper secondary school level.

B524. Teaching Elementary and Advanced Bookkeeping. Fall term. W. 4.30-6.30. 2 s. c. Prerequisite, elementary accounting. Einolf.

Aims and objectives; place in the curriculum; organization and presentation of subject matter; classroom procedures; providing for individual differences; correlation with other subjects; vocational standards.

B528. Teaching Elementary and Advanced Shorthand. Both terms. Th. 4.30-6. 3 s. c. Mumford.

Designed to aid teachers regardless of the system of shorthand used. Analysis of functional, direct, textbook, analytical, and correlated methods of teaching shorthand. Diagnosis and remedial instruction; teaching materials; lesson planning; testing procedures; standards of achievement.

B530. Teaching Typewriting. Laboratory fee, $1.50. Prerequisite, proficiency in typewriting. Spring term. Th. 6.30-8.30. 2 s. c. Mumford.

Recent interpretations of psychological principles applicable to the teaching and learning of typewriting. Motivation, timing and rhythm, typing patterns, learning curves, fatigue, accuracy, speed, and vocational standards.

B534. Teaching Office Practice. Laboratory fee, $1.50. Prerequisite, proficiency in typewriting and clerical practice. Fall term. Th. 6.30-8.30. 2 s. c. Mumford.

Organization and content of office practice courses to contribute to the training of stenographers, bookkeepers, and general clerks; classroom procedures; vocational standards.

B550. Curriculum Construction in Business Education. Fall term. S. 9-11. 2 s. c. Einolf.

Practices and trends in curriculum construction in business education.

B554. Unit Planning in the Social-Business Subjects. Fall term. S. 11-1. 2 s. c. Einolf.

Principles of Unit Planning applied to the social-business subjects.

B558. Consumer Economic Education. Spring term. S. 11-1. 2 s. c. Einolf.

Meaning and possibilities of the consumer education movement; activities of governmental and private agencies; joint responsibilities of different educational fields; contribution of business education through existing business subjects and special courses; collateral materials.

B562. Problems in Business Education. Spring term. S. 9-11. 2 s. c. Einolf.

Current problems and controversial issues in business education. Education B550, or equivalent, is a desirable prerequisite.

Elementary

E2. Industrial Arts. Both terms. Tu. 2-4 or M. 3-5. 2 s. c. Watson.

A practical course involving experiences with tools and materials suitable for kindergarten and elementary grades. Typical activities are carried out and evaluated with discussions of suggestive methods and principles of work.

E4. Child Study. Both terms. Tu. 2-4 or Th. 9-11. 4 s. c. Hooper.

A study of the child from three through eleven years of age; his nature and needs. How he learns and its bearing on methods of teaching. The requirements for those who enter the teaching profession.

E6. Supervised Student-Teaching in the Elementary Field. Fall or Spring term. M. 4-5. 2 to 6 s. c. Stocker.

Open to regularly certified secondary school teachers who have had three or more years of successful teaching experience in the public schools and who desire to qualify for certification in the elementary field according to the requirements of the Commonwealth of Pennsylvania. Projects germane to teaching technique will be assigned according to the individual need of each student.

E7. Principles of Teaching. Spring term. Tu. 2-4 or F. 4-6. 2 s. c. Raab.

Objectives of education in a democracy in relation to classroom procedure and the part the teacher can play in developing desirable social attitudes. Methods of classroom procedure that concern the advantages of both group and individual instruction. Activity programs and various types of school organizations.

E8. Directing Child Activities. Fall or Spring term. M., W., F. 3.30-5.30. Tu. 10. 4 s. c. Coleman.

Participation with children in informal groups, three periods per week. Weekly group conferences consider procedures and implications.

E9. Practice Teaching. Fall or Spring term. Hours to be arranged. 4 s. c. Hooper and Bond.

One period of student-teaching is required in the Junior year. Conferences and observation are included.

E10. Practice Teaching. Fall or Spring term. Hours to be arranged. 4 s. c. Hooper and Bond.

One period of student-teaching is required in the Senior year. Conferences and observation are included.

Assignment in all Practice Teaching will be to a school of the type in which the student will most probably find employment.

E11. Education for the Child. Fall term. M., W., F. 2-3. 3 s. c. Hooper.

A study of the factors underlying education for the child. Activities are studied in relation to children's needs and learning characteristics. The course aims to give the student practical help in planning a program of activities for kindergarten and elementary grades. It lays stress on the reasons for making certain choices of activities, equipment and supplies for the child's education.

E12. Literature for Children. Fall or Spring term. Th. 3-5. 2 s. c. Huus.

The following areas of literature for children from pre-school through elementary school age will be studied: folk and fairy tales, modern fanciful tales, myths and hero tales, realistic and informational stories, and poetry. Opportunity will be given for students to read and tell stories.

E16. Child Hygiene. Spring term. Th. 9-11. 2 s. c.

The physical conditions found in the children in the community and in the schoolroom which have a definite relation to the health of the child. The science of nutrition, stressing especially the part food plays in the nutrition of the child.

E17. Speech for the Classroom Teacher. Fall term. W. 3-5. 2 s. c. Davis.

Classroom procedure will be considered in regard to the mental and physical aspects of speech.

E22. Music Theory. Fall term. Tu., F. 9 and Th. 2 or M., F. 2 and W. 9. 3 s. c. Martin.

A background course in musical theory, sight singing and class voice work.

E23. The Teaching of Music in Elementary Grades. Prerequisite, Music E22 or equivalent. Spring term. T., F. 9, Th. 2 or M., F. 2 and W. 9. 3 s. c. Martin.

Methods and materials of teaching singing, rhythmic activities, appreciation, rhythm bands and singing games in kindergarten through grade six.

E34. Evaluation and Recording of Learning Outcomes. Fall term. Th. 3-5 or M. 2-4. 2 s. c. Raab.

Newer methods of collecting, organizing and recording data in pupil progress as a part of the teacher's extra-instructional activity.

E126. Teaching of Reading. Fall term. M., Th. 9 or M., Th. 11. 2 s. c. Coleman.

Nature and purposes of reading. Consideration of the developmental process; problems involved in reading various types of material; contributions of specific methods.

E128. Teaching of Language Arts. Spring term. T., F. 9 and Th. 2 or M. 3.30-5 and W. 3.30-5. 3 s. c. Coleman.

Methods of developing skills requisite to effective oral and written communication; language as means of self-expression.

E129. Teaching of Arithmetic. Fall term. Th. 9-11 or 3-5. 2 s. c. Worrell.

The aims, selection and presentation of an arithmetic program that will supply the growing needs of children in the elementary school. Use of every day experiences to make arithmetic vital and meaningful. Clear number concepts are established and desirable habits and skills acquired through adequate practice.

E130. Teaching of Science. Fall or Spring term. S. 9-11. 2 s. c. Russell.

Survey of science topics with experimental laboratory work suitable for the elementary grades.

E131. The Teaching of Social Studies. Fall or Spring term. F. 2-4. 2 s. c. Preston.

Children's acquisition of social concepts; organization of social studies in

elementary school; selection of content, materials, methods; appraisal of typical units.

E526. The Supervision and Teaching of Reading. Spring term. F. 4.30-6.30. 2 s. c. Huus.

Nature and purposes of reading. Consideration of the developmental process; problems involved in reading various types of material; contribution of specific methods; techniques of evaluation.

E527. The Selection and Use of Reading Materials. Fall term. Tu. 4.30-6.30. 2 s. c. Huus.

Evaluation of various types of literary and informational reading materials and their use in the elementary school; the contribution of recreational reading to effective participation in modern life.

E528. Supervision and Teaching of Language Studies in the Elementary School. Spring term. S. 9-11. 2 s. c. Coleman.

The place of language in the life of the child; how vocabulary is acquired; the development of habits of speaking and listening. Purposes and types of written composition; handwriting, spelling, punctuation and grammar as aids to composition. The use of spoken and written language for self-expression.

E529. Supervision and Teaching of Arithmetic. Fall term. Th. 4.30-6.30. 2 s. c. Coleman.

Significance of arithmetic in world of today; development of number concepts; arithmetic skills and problem solving; textbook evaluation; grade placement of subject matter.

E530. Supervision and Teaching of Science in the Elementary School. Spring term. W. 4.30-6.30. 2 s. c. Cadbury.

Science experiences for children. Emphasis on teaching procedures and field work.

E531. Supervision and Teaching of the Social Studies in the Elementary School. Spring term. S. 9-11. 2 s. c. Preston.

Children's acquisition of social concepts; the function and organization of social studies in the elementary school; the selection of content, materials, methods; development and appraisal of typical units.

E540. Principles of Elementary Education. Fall term. S. 11-1 or Spring term. Th. 4.30-6.30. 2 s. c. Coleman.

Organization, objectives and control of elementary education; critical examination of curriculum, teaching personnel, school management, classification and promotional practices prevailing in elementary schools.

E541. The Elementary School Child. Fall term. S. 11-1. 2 s. c. Hooper.

The physical, mental and social growth and development of the child; influence of retardation and acceleration; the relation of the school program to child development.

E542. The Elementary School Curriculum. Fall term. S. 9-11. 2 s. c. Preston.

Analysis of the elementary school curriculum from standpoint of its social basis, relation to children's capacities and needs, and contemporary forms of organization; procedures of curriculum development.

E544. Learning and Study in the Elementary School. Spring term. S. 11-1. 2 s. c. Huus.

Nature of the learning process; implications for instructional procedures.

E546. Modern Practices in Elementary School Teaching. Spring term. Tu. 4.30-6.30. 2 s. c. Prerequisite, the permission of the instructor. Coleman and Huus.

Each student will study a problem in classroom practice, surveying research and opinion, interviewing and observing. For experienced teachers only.

E600. Education of the Young Child. Spring term. M. 4.30-6.30. 2 s. c. Hooper.

A study of the learning process as applied to children from four through eight years of age. Modern teaching methods resulting from a knowledge of how the child learns. Each student will be required to make a study in a field of special interest, showing the relation of child learning to teaching method.

E692. Current Problems of Supervision in Elementary Education. Spring term. Th. 4-7. 2 s. c. Prerequisite, Education 691. Preston.

Restricted to those engaged in or preparing for supervisory or administrative work. Detailed analysis of problems of instruction, guidance, organization, and improvement of teaching personnel. Field work is involved.

E900. Seminar in Elementary Education. Both terms. F. 6.30-8.30. 4 s. c. Preston.

For doctoral candidates and others engaged in research and advanced professional study.

Fine Art Education

F520. Methods of Teaching Art in the Elementary and Secondary Schools. Both terms. W. 4.30-6.30. 4 s. c. Bookbinder.

Procedures in teaching fine and industrial arts and a survey of art in everyday living as a preparation for teachng the arts in the elementary and secondary grade levels.

History of Education

H521. History of Education in the United States. Fall term. S. 9-11. 2 s. c. Woody.

The rise of universal education from Colonial days to the present and the forces which conditioned it.

H522. Higher Education in United States. Spring term. S. 9-11. 2 s. c. Mulhern.

The development of our higher schools in the light of the economic, social, religious and intellectual forces operating in our changing civilization.

H523. Comparative Education. Both terms. S. 9-11. 4 s. c. Mulhern and Woody.

Fall term: The modern educational systems of England, France and Italy, in connection with the factors that have conditioned them. Mulhern.

Spring term: Germany and the Soviet Union and the factors which have shaped their life and education. Woody.

H550. History of Education. Both terms. F. 4.30-6.30. 4 s. c. Woody.

This course (either half of which may be taken for credit) deals with the development of educational theory and practice from earliest time to the present, with attention to those forces which have influenced them.

Higher Education

Hr650. Principles and Practices of Higher Education in the United States. Fall term. W. 4.30-6.30. 2 s. c. Grizzell.

Principles underlying higher education in the United States. The emphasis in this course is upon structure, organization, administration, staff, and educational program.

Hr651. Current Practices in Higher Education in the United States. Spring term. W. 4.30-6.30. 2 s. c. Grizzell.

This course is a continuation of Hr650 and emphasizes the needs of students, personnel services, methods of instruction and evaluation.

Hr652. Principles and Practices of Teacher Education. Fall term. M. 4.30-6.30. 2 s. c. McMullin and Department Staff.

This course and Hr653 are designed for candidates for the Ed.D. degree with the specialization, director of teacher education. A study of the development of teacher education institutions in the United States and other nations, with consideration given to such areas as: aims, programs, student selection, placement and follow-up.

Hr653. Problems in the Professional Education of Teachers. Spring term. M. 4.30-6.30. 2 s. c. McMullin and Department Staff.

Critical analysis of problems confronting institutions concerned with the pre- and in-service preparation of teachers. The relation between general education and professional education; the time and location of professional work in the education of students; extra academic experiences; problems of supervised practice; relation of teacher education to certification.

Music Education

Adviser: Asst. Prof. J. L. Scott, Room 301, Eisenlohr Hall.

Students specializing in the teaching of and supervising of Music should follow the curriculum for the preparation of teachers and supervisors of Music as outlined on page 54. For courses in Music content see pages 115, 116.

For requirements for admission as a Music Major in the Master of Science Program, see page 70.

M19. Music for the Elementary Classroom Teacher. Fall term. Tu. 4.30-6.30. 2 s. c. Martin.

A course devoted to the development of the following musical skills and knowledge essential for the classroom teacher: (1) adequate singing voice, (2) elementary piano performance, (3) vocal music reading, and (4) knowledge of elementary theory.

M24. Laboratory in Elementary School Music Education. Both terms. Open only to Juniors and Seniors in Music Education. Prerequisite, or concurrent, Psychology E3. M., Th. 9-11. 4 s. c. Martin.

An orientation course based on classroom observation and pre-practice teaching experience with children. Principles controlling classroom practices in music are developed through observation, readings and group discussion. Fall term prerequisite to Spring term.

M519. Music Methods for the Classroom Teacher. Spring Term. Tu. 4.30-6.30. 2 s. c. Martin.

A course devoted to materials and procedures for teaching the following musical activities in the elementary school: (1) singing, (2) rhythmic expression, (3) music reading, (4) music listening, and (5) simple melody and percussion instruments. M19 or equivalent prerequisite to this course. Graduate credit given only on consent of instructor.

M520. The Teaching and Supervision of Music in the Primary Grades. Fall term. S. 11-1. 2 s. c. Martin.

The place and function of music in child development. Materials and methods of procedures for grades 1, 2 and 3 in singing, listening, rhythmic expression, playing on instruments, and creative music.

M521. The Teaching and Supervision of Music in the Intermediate Grades. Spring term. S. 11-1. 2 s. c. Martin.

Organization of materials and methods of procedure for music in grades 4, 5 and 6. An enriched program of singing, playing, listening, rhythmic expression, music reading and creative music. Important texts and approaches evaluated.

M522. The Teaching of General Music in the Junior and Senior High School. Fall term. S. 9-11. 2 s. c. Scott.

Aims, procedures and materials, with attention to recent practices and trends in teaching General Music in the junior and senior high school.

M523. Principles and Problems in Music Education. Spring term. S. 9-11. 2 s. c. Scott.

A study of the influence of current educational theory and practice upon the teaching of music. Survey of current literature and research studies in music and music education.

M524. The Teaching of Instrumental Music. Fall term. Th. 4.30-6.30. 2 s. c. Wilson.

Discussion of place, aim and general methods of instrumental music in schools. Organization and administration of orchestras, bands and instrumental classes.

M528. Instrumental Arranging. Spring term. Th. 4.30-6.30. 2 s. c. Wilson.

A study of range and transposition of instruments, instrumental tone quality, balance and blend; orchestration and bandstration; and writing for small ensembles of various instruments.

Nursing Education

NEH550. Foundations of Healthful Living. Fall or Spring term. W. 2-4. 2 s. c. Hall.

An advanced course emphasizing the newer scientific facts and principles which underlie healthful living.

NEH551. The Health of Students in Schools of Nursing. Fall or Spring term. F. 1-2. 1 s. c. Hall.

This course is a continuation of H550, focussing primarily on the application of fundamental principles to the health problems of students in schools of nursing. Prerequisite or concurrent, H550 or its equivalent.

NEH552. Development of a Student Health Program. Spring term. 2 s. c. Tu. 2-4. Chase.

A study of existing and recommended plans for provision of adequate health services in schools of nursing. Prerequisite, H551.

NEH553. Principles of Body Mechanics and Posture. Fall or Spring term. Th. 4.30-6.30. 2 s. c. Carper.

This course is planned to give an understanding of correct posture and body mechanics as it is applied to both the patient and the nurse herself. Integration of the principles is emphasized in the clinical specialties and in all the nurse's care and teaching as well as her part in community programs for the handicapped.

NES530. Principles and Methods in Nursing Education. Fall or Spring term. Tu. 4-6. 2 s. c.

A basic course in teaching, including a study of the objectives and organization of the educational program as a whole; basic principles underlying the teaching-learning process; evaluation of various methods of directing learning with reference to their usefulness in nursing education.

NES532. Teaching of the Nursing Arts. Spring term. Th. 4-6. 2 s. c.

Discussion will center largely on the beginning course in nursing arts in

the basic curriculum. This course will be studied from the standpoint of objectives, selection and organization of content, and effective teaching-learning procedures. Prerequisite, S530 or its equivalent.

NES533. Teaching in the Clinical Field. Spring term. W. 4-6. 2 s. c. Bower.

This course will deal with problems relating to the teaching of nursing in the major clinical fields. Consideration will be given to plans for organizing clinical instruction, for the selection of student experience, and for evaluation of results. Prerequisite, S530 or its equivalent.

NES541. Supervision of Nursing. Fall term. W. 4-6. 2 s. c. Bower.

Principles of Supervision and their application in the administration of a hospital department; staff education, personnel administration, improvement of nursing service. Prerequisites, S530, S40.

NES542. Administration of Schools of Nursing. Fall term. Tu. 4-6. 2 s. c. Bower.

This course is open to nurses who qualify as to experience in this field. It will include a consideration of standards, problems and methods involved in effective organization and administration of schools of nursing. Prerequisite, S541.

NES543. Special Problems in Nursing Education. Spring term. Tu. 4-6. 2 s. c. Bower.

A continuation of S542 dealing largely with problems relating to legislation and standards governing nursing education, accreditation of schools, and nursing practice. Prerequisite, S542.

NES600. Project Conference in Nursing Education. Spring term. 2 s. c. Bower, Chase, Lynch and Staff.

This course aims to acquaint students who are candidates for the M.S. in Ed. degree with principles and techniques of research in professional problems.

Overbrook

The courses offered under this classification are primarily for students preparing for work with the blind.

OV301. History and Philosophy of Work for the Blind. Spring term. F. 3.30-5.30. 2 s. c. Mr. Cauffman.

OV320. Arts and Crafts. Both terms. Hours arranged. 4 s. c.

OV340. Medical Social Information. Spring term. S. 9-11. 2 s. c. Miss Price and Staff.

OV420. Arts and Crafts. Both terms. Hours arranged. 4 s. c.

OV440. Social Case Work Approach to Work with Adult Blind. Spring term. W. 7-9. 2 s. c. Miss Price.

OV5. Field Work with the Blind. Both terms. Hours arranged. 10 s. c.

OV501. Diseases of the Eye. Spring term. 2 s. c.

OV535. Teaching Arts and Crafts. Both terms. Hours arranged. 2 s. c.

OV536. Teaching Braille and Typing. Both terms. Hours arranged. 2 s. c.

OV550. Social Case Work with Blind. Fall term. W. 7-9. 2 s. c. Miss Price.

Secondary Education

S5. Supervised Student-Teaching in Secondary School. Fall or Spring term. 10 s. c. No credit until the fifth year is completed. Stocker.

Open to students in the School of Education who have been admitted as fifth-year students and are following the curriculum prescribed for fifth-year students. Student-teachers are assigned to secondary schools for full-time work during one term. Assignment will be to a school of the type in which the student will most probably find future employment. Rosters must be approved by Dr. Stocker before admission to the course. Student-teaching assignments must be made before the close of the term preceding the one during which this course is to be taken.

S6. Supervised Student-Teaching in the Secondary Field. Fall or Spring term. M. 4-5. 2 to 6 s. c. Stocker.

Open to regularly certified elementary school teachers who have had three or more years of successful teaching experience in the public schools and who desire to qualify for certification in the secondary field according to the requirements of the Commonwealth of Pennsylvania. Projects germane to teaching technique will be assigned according to the individual need of each student.

S527. Methods of Teaching German. Fall term. W. 4-6. 2 s. c. Gorr.

S534. The Teaching of the Social Studies. Both terms. W. 4.30-6.30. 4 s. c. Melchior.

The teaching of History, Civics, Economics, Political Science, Problems of Democracy, Sociology, and Current Issues in secondary schools. Aims and their achievement; historical development and evaluation of methods; selection and organization of subject-matter.

S536. Problems of Teaching Romance Languages. Both terms. W. 4.30-6.30. 4 s. c. Emgarth.

Values, objectives, course content, method on the secondary school and college levels, tests. Critical summary of recent investigation in the field.

S538. The Teaching of English Composition. Fall term. W. 4.30-6.30. 2 s. c. Black.

Aims, opportunities, and problems involved in the teaching of English composition and the related subjects, such as spelling and grammar. Methods of presenting theme assignments, and special projects, and of correcting and evaluating student papers. Presentation of model lessons.

S539. The Teaching of English Literature. Spring term. W. 4.30-6.30. 2 s. c. Leach.

Aims, opportunities, and problems involved in the teaching of English literature—the novel, short story, play, essay and poetry. Assignments and special projects, methods of correcting and evaluating student papers. Presentation of model lessons.

S650. Principles of Secondary Education. Both terms. Th. 2-4, S. 11-1. 4 s. c. Grizzell and Shafer.

The evolution of secondary education in America and practices in other countries provide the basis for evaluating present practices and trends in American secondary education.

S660. The Secondary School Curriculum (Junior and Senior High School). Fall term. W. 2-4 or S. 11-1. Spring term. S. 9-11. 2 s. c. Grizzell and Oliver.

Comprehensive treatment of the secondary school curriculum—evolution of and factors determining the program of secondary education; current trends, principles and practices and a program of curriculum development. Laboratory optional.

S660L. Laboratory in Secondary School Curriculum. Fall or Spring term. Hours to be arranged. 1 s. c. Oliver and Duffy.

Optional, but if elected must be taken with S660.

S661. The High School Curriculum. Fall or Spring term. Th. 10-12 or Th. 2-4. 2 s. c. Oliver.

A comprehensive treatment of junior and senior high school curricula. The meaning and function of the curriculum; educational objectives and curriculum values; pupil's interests and needs; local conditions and curricula; the program of studies; the organization of courses; student activities; criteria for the evaluation of curricula.

S662. The Activities Program of the Secondary School (Junior and Senior High School). Fall term. M. 4.30-6.30. 2 s. c. Gruber.

Existing and proposed school and community activities will be considered from the standpoint of philosophy, functions, organization and administration.

S663. Organization of Units of Learning. Spring term. W. 2-4. 2 s. c. Grizzell.

Principles and practices in unit construction applied in developing the curriculum in actual situations. Laboratory optional. Education S660, S662, or equivalent desirable prerequisites.

S663L. Laboratory in the Organization of Units of Learning. Spring term. Hours to be arranged. Oliver and Duffy.

Optional, but if elected must be taken concurrently with S663.

S670. Learning and Study in the Secondary School. Fall term. S. 9-11. Spring term. F. 6.30-8.30. 2 s. c. McMullin.

The nature of learning and its implications for directing the learning activities of secondary school pupils. Special attention is given to directed study practices.

S671. Problems of Classroom Method in the Secondary School. Spring term. W. 4.30-6.30. 2 s. c. Shafer.

An analysis and evaluation of progressive methods of directing learning.

S672. The Teaching of Latin. Both terms. Tu. 4.30-6.30. 4 s. c. Heffner.

The value of the classics, their relation to life, history of classical studies, criticisms of textbooks and collateral material, methods of principles of teaching.

S675ab. Method and Practice in Teaching Mathematics. Both terms. W. 4.30-6.30. 4 s. c. Oliver.

(a) Attention to the development of a mathematics program for secondary school youth: a "Master Plan." Formulation of objectives in Grades 7-12. Evaluation of outcomes. Research on a curriculum problem.

(b) Emphasis upon the instructional aspects of secondary school mathematics: Classroom control, individual differences, lesson planning, supervised study, testing and grading, the presentation of certain troublesome topics in mathematics. Research on a teaching problem.

S676. The Teaching of General Science. Both terms. W. 4.30-6.30. 4 s. c. Stocker.

(a) Methodology in General Science. (b) Problems in teaching science; a study of the literature in science teaching.

S680. Principles of Guidance in the Junior and Senior High School. Fall term. Th. 4.30-6.30 or F. 9-11. 2 s. c. Matthews.

The psychological and educational bases underlying all phases of guidance.

S681. The Administration of Guidance in the Junior and Senior High School. Spring term. Th. 4.30-6.30 or F. 9-11. 2 s. c. Matthews.

Special phases of guidance, organization and administration of guidance in the public schools, and qualifications of guidance workers.

S682. The Home Room. Spring term. M. 4.30-6.30. 2 s. c. Gruber.

An intensive study of the functions, activities, and administration of home rooms in junior and senior high schools.

S690. Secondary School Administration. Fall term. S. 9-11. 2 s. c. Shafer.

For principals and others interested in the administration of the secondary school. Emphasis upon organization and management. Education S650 or equivalent is desirable prerequisite.

S691. Secondary School Supervision. Spring term. S. 9-11. 2 s. c. Shafer.

For superintendents, principals, supervisors and department heads; others admitted to the course by special permission of the instructor. Education S650, S690, 691 are desirable prerequisites.

S692. Problems of the Department Head. Spring term. F. 4.30-6.30. 2 s. c. Oliver.

For department heads and prospective department heads in secondary schools. Education S650, S690, S691 are desirable prerequisites.

S900. Seminar in Secondary and Higher Education. Both terms. F. 6.30-8.30. 4 s. c. Matthews.

For students engaged in special research work and advanced students working on doctoral dissertations.

Vocational Education[1]

V1. Introduction to Education. Both terms. F. 6.30-8.30. 4 s. c. Hartmann.

An orientation course planned to assist students to acquire a better understanding of the requirements of teaching as a profession in order to determine whether or not they should begin preparation for that profession.

V5. Supervised Student-Teaching in the Vocational Field. Fall term. W. 8.30-9.30 p. m. Prerequisite, V1. 6 s. c. Hartmann.

V16. Shop Layout and Management. Fall term. W. 6.30-8.30. 2 s. c. Hartmann.

The purpose of this course is to develop an understanding of, and ability in, the selection and placement of shop equipment and supplies and the management of the material affairs of school shop.

V517. Conference Leader Training. Spring term. W. 6.30-8.30. 2 s. c. Hartmann.

The purpose of this course is to develop an understanding of, and some abilities in, the techniques of conference leadership.

V520. Principles of Education for Vocational Teachers. Both terms. M. 6.30-8.30. 4 s. c. Hankin.

A basic course designed to develop an appreciation of the meaning and function

[1] For a program of Vocational Education Courses for private school personnel, consult the Director of Vocational Teacher Education, 3810 Walnut Street.

of education, a working aim for the school, a scientific attitude toward its problems and some degree of familiarity with present developments, problems, methods, and practice.

V521. Vocational Education. Both terms. Th. 6.30-8.30. 4 s. c. Jones.

The range of activities covered by the Smith-Hughes Law. Vocational Education as an integral part of the public school system. The development of a modern point of view in regard to Vocational Education.

V522. Methods in Vocational Education. Both terms. S. 9-11. Prerequisite, V520. 4 s. c. Hankin.

Methods of instruction as determined by the psychology of learning, by the nature and needs of the pupil, and by current practice.

V523. Modern Industries and Industrial Relations. Both terms. F. 4.30-6.30. 4 s. c. Hartmann.

Industries from the viewpoint of guidance and the problems involved in the relationship between the employer, the employed, and society at large.

V524. Curriculum Construction. Both terms. F. 6.30-8.30. 4 s. c. Jones.

Selection and organization of pupil activities and associated instructor activities appropriate to the objectives of education and the needs of the pupil. Students will organize under supervision courses which they teach or expect to teach and will prepare instruction sheets for the activities of the courses.

V525. Tests and Measurements for Vocational Teachers. Both terms. S. 11-1. 4 s. c. Hankin.

A study of intelligence tests, mechanical aptitude tests, trade tests, achievement tests. Methods of developing and using various forms of tests and examinations for shop and classroom instruction and of evaluating the results.

V526. Visual and Sensory Techniques. Fall or Spring term. M. 4.30-6.30. 2 s. c. Hankin.

The function of the senses in the learning process. Pictorial and other sensory aids in instruction. Projection apparatus. Source of slides, films, and other sensory aids.

V527. Supervision in Vocational Education. Fall term. Th. 4.30-6.30. 2 s. c. Jones.

Desirable experience, personality characteristics, educational assets and professional preparation for supervisor in Vocational Education. Techniques in the promotion of a program of Vocational Education. The organization of subject matter. Upgrading of teachers.

V528. Administration in Vocational Education. Spring term. Th. 4.30-6.30. 2 s. c. Jones.

An analysis of the functions of administration of Vocational Education and study of the administrative techniques which have been developed in the various fields.

V529. Occupations. Fall term. S. 9-11. 2 s. c. Jones.

Development of principles in that function of the guidance program concerned with gathering and imparting significant information about occupations. Organization of classes in occupation, utilization of other school subjects as a stimulus for the study of vocations, available recorded information about occupations, plant visitation and report.

V530. Vocational Guidance. Spring term. S. 9-11. 2 s. c. Jones.

The principles underlying all forms of guidance in the public school; its relation to education. Practical ways of organizing guidance activities.

Courses below omitted in 1951-52:

527.—*Character Education.*
542.—*Utilization of Radio in Elementary Education.*
543.—*Utilization of Radio in Secondary Education.*
544.—*Current Problems in Radio Education.*
A563.—*Educational Surveys.*
A656.—*Pupil Accounting.*
A658.—*The Legal Bases of Public School Administration.*
B522.—*Remedial Instruction in Penmanship in the Business Curriculum.*
B526.—*Teaching Salesmanship in the High School.*
B535.—*Problems and Practices in Teaching Marketing and Merchandising Subjects.*
B566.—*Supervision of Business Education.*
E500.—*Conference.*
E534.—*Evaluation and Recording of Learning Outcomes in the Elementary School.*
E542L.—*Curriculum Laboratory.*
E545.—*The Activities of the Teacher in the Modern Elementary School.*
E548.—*Guidance in the Elementary School.*
E693.—*Elementary School Supervision.*
H524.—*History of Education of Women.*
H525.—*History of Modern Educational Problems.*
H655.—*History of Industrial Education.*
H660.—*Educational Theorists.*
H900.—*Seminar in History of Education.*
M526.—*Teaching of Music in the Elementary and Junior High School.*
M527.—*Musical Activities in the School and Community.*
M534.—*The Teaching of Singing.*
S651.—*The Junior High School.*
S664.—*Coordinated Program of Education for Older Youth.*
S683.—*Education of Youth for Leadership.*
S693.—*Cooperative Supervision.*
S694.—*Evaluation in Secondary Education.*

ENGLISH

Advisers: Assoc. Prof. MacEdward Leach (undergraduate students), Room 103, Bennett Hall, and the Chairman of Graduate English (graduate students), Room 203A, College Hall.

Students in the five year program specializing in the teaching of English should follow the curriculum for the preparation of English teachers as outlined on pages 42, 43.

Graduate students are required to register in advance for the examination in English for the Master of Science in Education. For the last date on which registrations will be accepted, they should consult the calendar of the Graduate School of Arts and Sciences.

34C. Standards in Spoken and Written English. Fall term. W. 4.30-6.30. 2 s. c. Stine.

Factors controlling usage in pronunciation, grammar, and diction. Phonetics, the phonetic alphabet, and exercises in phonetic transcriptions; standard and substandard English and the dialects; correction of speech faults in teacher and student. Designed to aid teachers of grammar, composition, and oral English.

120. Business Correspondence. Fall or Spring term. Prerequisite, 103. 2 s. c. Dowlin.

Style, structure and aims of the modern business letter, problems in the handling of various kinds of business transactions by correspondence, and practice in dictation.

For courses in methods see Education S538 and S539.

FINANCE

E1. Principles of Finance. Both terms. 4 s. c. Worley.

A survey of the financial system, with emphasis on the functional relationships of money, credit, and banking. Special attention is devoted to economic stabilization, corporation and consumer finance, and financial problems of the family.

FRENCH

Adviser: Prof. George O. Seiver, Room 301, College Hall.

Students in the five year program specializing in the teaching of French should follow the curriculum for the preparation of teachers of foreign languages, pages 43, 44. Before being approved as a major in French the candidate must arrange for an interview with the departmental adviser.

New students who plan to register for work in French beyond the elementary course are required to take a placement examination which will be held during the registration period.

The following courses arranged specifically for those specializing in the teaching of French are required according to recommendations of the adviser:

6C. Introductory Conversation. Both terms. 2 hrs. a wk. 4 s. c. Prerequisite 2 or equivalent. P. Delattre.

This course aims to enlarge the vocabulary and to give facility in the use of oral French.

16. Review of Grammar. Both terms. 2 hrs. a wk. 4 s. c. Prerequisite, 4. Roach.

A review of the fundamental points of syntax.

17. Practical Phonetics. Both terms. 2 hrs. a wk. 4 s. c. Prerequisite, 4. P. Delattre.

Study of the physiology of French speech. Systematic corrective drill leading to proper habits of French articulation and diction. Phonetic transcription.

19. Oral French. Both terms. 2 hrs. a wk. 4 s. c. Prerequisite, 4. Gallagher.

For students who wish to increase their ability to understand and speak French.

300. Conference Course for Majors in French. Both terms. 2 hrs. a wk. 8 s. c. Lynes.

This course is designed to extend and correlate the work of the entire major program.

506. French Phonetics. Primarily for graduates, but open to advanced undergraduates by special permission of the department. Both terms. 2 hrs. a wk. 4 s. c. P. Delattre.

The theory and practical application of phonetics. Especially designed for teachers of French and those who are preparing to teach.

GEOGRAPHY

Adviser: Prof. Lester E. Klimm, Room 322, Logan Hall.

Students in the five year program specializing in the teaching of Geography should follow the curriculum for the preparation of teachers of Geography as outlined on page 44. They should complete twenty-four semester credits in Geography and designated allied subjects. Of these required credits at least fifteen semester hours must be in Geography and must include either Geography 1 in the Wharton School, Geography 1 in the College of Liberal Arts for Women, Geography 1 (Arts and Science for Men), or Geography 7C in the College Collateral Courses. Nine semester credits must be selected from the following: Geology 3, 6 or 103; Anthropology 1 or 1C; Economics 2C or 11; and History 1, 45 or 45C.

GERMAN

Adviser: Assoc. Prof. Adolf D. Klarmann, Room 305, College Hall.

Students in the five year program specializing in the teaching of German should follow the curriculum for the preparation of teachers of foreign languages, pages 43, 44.

Final credit is given at the end of each term in all courses except German 1. Students desiring to begin German 1, 2, 5, 10, or 11 at the beginning of the second term should consult the chairman.

The following courses are required of students in the School of Education specializing in the teaching of German. For the course in *Methods of Teaching German,* see Education S527.

11. Writing of Essays and Conversation in German. Both terms. 2 hrs. a wk. 4 s. c. Klarmann.

12. Cultural Background of German Literature. Spring term. 2 hrs. a wk. 2 s. c. Gorr.

532. Survey of German Literature in the 18th and 19th Centuries. Both terms. 2 hrs. a wk. 4 s. c. Gorr.

S527. Methods of Teaching German. See under Secondary Education, page 95.

Courses below omitted in 1951-52:

30.—*History of the German Language.*
511.—*Studies in German Style.*
531.—*Survey of German Literature from the Beginning to 1700.*

HEALTH AND PHYSICAL EDUCATION AND RECREATION

Advisers: Prof. F. W. Luehring and Prof. W. F. Meredith, Room 205, Hutchinson Gymnasium; Asst. Prof. H. L. Berridge, Room 202, Hutchinson Gymnasium.

The courses in Health, Physical Education and Recreation are listed under General, Health Education, Physical Education, and Recreation. The letter prefixed to a course number refers to one of these divisions. Courses designated by HPER are general.

Students in the five year program specializing in the teaching of Health and Physical Education and Recreation should follow the curriculum as outlined on page 52. Courses numbered from 1 to 499 inclusive are undergraduate; those from 500 to 599 inclusive may be taken for either undergraduate or graduate credit; those numbered 600 or above are graduate.

GENERAL

HPER210. Applied Anatomy and Physiology. Both terms. Tu., F. 12. 4 s. c. Mercer.

The essentials of the anatomy and physiology of the human body; structure and function of the skeletal, muscular, nervous, circulatory, respiratory, digestive and other systems and their relationship to health and physical education.

HPER312. Physiology of Activity. Fall term. Tu., F. 10. 2 s. c. Mercer.

The nature of muscular contraction; the effect of activity on the various systems of the body; the influence of food, breathing, temperature, fatigue and exhaustion.

HPER313. First Aid and Safety Education. Fall term. Tu., F. 11, W. 2. 2 s. c. Burdick.

First half of semester devoted to qualifying students for First Aid instructorship. Second half of semester devoted to study of and practice in techniques of safety surveys. 1 hour lecture and 2 hours laboratory per week.

HPER411. Principles of Health and Physical Education and Recreation. Both terms. Tu., F. 12. 4 s. c. Berridge or Meredith.

The nature and purpose of health education, physical education and recreation in relation to other fields and general education. The scientific derivation of principles and their application in the establishment of sound programs.

HPER421. Administration of Health and Physical Education. Spring term. Tu., F. 10. 2 s. c. Luehring.

State laws; departmental organization; organization of staff and activities; administration of facilities; budgets; schedule making; public relations, etc.

HPER616. Tests and Measurements in Health and Physical Education. Fall term. S. 9-11. 2 s. c. Prerequisite, Education 660 or equivalent. Berridge.

Study of the various tests and measurements in health and physical education; methods of administering tests and the use of the results. Evaluation of tests and testing materials.

HPER627. Safety Education. Spring term. Th. 6.30-8.30. 2 s. c. Scott.

The program of safety education in the public schools; selection and organization of materials; methods and motivation; use of visual aids, projects and agencies outside of the school.

HPER628. Health and Physical Education for the Administrator. Spring term. Tu. 4.30-6.30. 2 s. c. Berridge.

A survey for principals and superintendents dealing with the place and function of health and physical education; program of health and physical education (including athletics); selection of staff; judging programs; use of tests and measurements. Not for majors in health and physical education.

HPER800. Problems in Health Education, Physical Education and Recreation. Both terms. M. 6.30-8.30. 4 s. c. Berridge.

The nature and purpose of research; methods and techniques of problem solving; the solution of a specific problem in the above fields. *Prerequisites,* Education 655 and Physical Education 616.

Health Education

HE310. The Health of the Individual. Fall term. M., Th. 12. 2 s. c. Meredith.

Preventive medicine; influence of heredity; sound health practices with reference to foods and nutrition, exercise, play, rest, sleep, and relaxation; the prevention of specific diseases.

HE320. The Health of the Community. Spring term. M., Th. 11. 2 s. c. Lees.

Activities of federal, state and municipal agencies. The sanitation of water and milk supplies, meat inspection; communicable disease control; infection and immunity; specific prophylaxis through vaccines and anti-toxins.

HE410. Health Service in Schools. Fall term. M., Th. 10. 2 s. c. Lees.

The place and scope of modern health service in schools; health examination and inspection; detection and treatment of defects; interpretation of signs and symptoms; follow-up procedures; control of communicable disease.

HE523. Healthful School Living. Spring term. M. 4.30-6.30. 2 s. c. Meredith or Berridge.

Responsibility of the school for the protection of student health; the effect of the school environment on the health of the whole child.

HE620. Methods in Health Education. Spring term. S. 9-11. 2 s. c. Meredith or Berridge.

The establishment of criteria for the evaluation of material for health education; the organization of instruction; the relationship of the health examination, follow-up program and health supervision; methods and motivation.

HE621. Mental Hygiene. Spring term. Th. 6.30-8.30. 2 s. c. Delano.

Mental hygiene as related to health education; structure and growth of the personality; psychosociologic adjustments; problems in behavior; analysis of maladjustments of the adolescent and pre-adolescent; principles of modern psychiatry. Omitted 1951-1952.

HE622. Advanced Principles of Health Education. Spring term. M. 6.30-8.30. 2 s. c. Berridge.

A study of the child in relation to his total environment and the responsibility of the various agencies to the education of the whole child in matters pertaining to health.

Physical Education

Student majors who are unable to pass the swimming test must take sufficient work to meet the requirements without credit.

PE100. Dance (Rhythmic analysis, folk, and square). Both terms. W. 2-4. 1 s. c. Lysle and Taiz.

The learning of skills, selection of materials, methods of instruction and planning of programs.

PE101. Athletics. Both terms. 6 hrs. a wk. 3 s. c.

Section I—Women. Daily 3-5. Burdick, Farquhar, Lysle, Welsh.

Practice in the fundamentals of hockey, basketball, badminton, tennis.

Section II—Men. Daily 4-6. Dallmar, Doherty, Munger and Staff.

Practice in the fundamentals of football, basketball, track and field.

PE200. Dance (Tap and Modern). Women. Both terms. M., Th. 11. 1 s. c. Taiz.

Fundamentals of tap and modern dance; analysis of form; composition.

PE201. Athletics. Both terms. 4 hrs. a wk. 2 s. c.

Section I—Women. Daily 3-5. Burdick, Farquhar, Lysle.

Practice in the fundamentals of archery, fencing, golf, tennis, volleyball.

Section II—Men. M., W., Th. 9, Tu. 2. Preiss, Scott, Wood.

Practice in the fundamentals of badminton, handball, tennis, volleyball.

PE202. Swimming. Both terms. Tu., F. 11. 1 s. c. Burdick, Dannenhirsch, Medica.

Fundamentals of crawl, back, side and breast strokes and elementary diving. (No credit for non-swimmers.)

PE203. Gymnastics and Tumbling. Both terms. W. 2-4. 1 s. c. Burdick, Lysle and Preiss.

Fundamental work in marching, calisthenics, apparatus and tumbling.

PE300. Dance (Social). Fall term. W. 11-1. ½ s. c. Taiz.

Instruction in the best forms of ballroom dance, fox-trot, waltz, rhumba, etc.

PE301. Sports Theory. Both terms. M., W. 2. 1 s. c.

Section I—Women. Burdick, Dannenhirsch, Farquhar, Welsh.

Detailed study of the rules and techniques, demonstration and practice in basketball, hockey, swimming, tennis, etc.

Section II—Men. Berridge, Brennan, Scott, Thompson.

Study of rules and techniques of the following: games and plays, lacrosse, soccer, wrestling, etc.

PE302. Swimming. Both terms. 2 hrs. a wk. 1 s. c. Burdick, Dannenhirsch, Medica.

Semester I—Advanced Swimming and Diving. W., F. 9.

Semester II—Life Saving. M. 7-10 P.M.

Functional swimming leading to the Senior's and instructor's certificate.

PE303. Gymnastics and Tumbling. Both terms. M., Th. 9. 1 s. c. Burdick, Lysle, Preiss.

Advanced work in gymnastics and tumbling to develop personal skill; teaching techniques and practice.

PE304. Plays and Games. Spring term. W. 11-1. ½ s. c. Berridge and Burdick.

Graded plays and games; story plays and rhythmics through the more highly organized games and activities.

PE315. Modern Dance Technique. Fall term. M. 5-7. 2 s. c. Taiz.

Analysis and practice of basic principles of modern technique. Analysis of rhythm and form.

PE316. Dance Composition I. Prerequisite, 1 year of dance technique. Fall term. Hours to be arranged. 2 s. c. Taiz.

Fundamental elements of composition; improvisation to discover the quality and dynamics of movement and rhythm; elements of form.

PE317. Dance Composition III. Prerequisite, Dance Composition I and II.

Practice in advanced composition for individuals and groups with emphasis upon the creative.

PE321. Fundamentals of Corrective Physical Education. Spring term. M., Th. 10. 2 s. c. Farquhar and Staff.

The essentials of preventive and corrective physical education with relation to the general program; coordination with medical and nursing services; examination; prescription and conduct of exercises.

PE322. Body Mechanics. Spring term. Tu., F. 10. 2 s. c. Farquhar.

The study and application of the laws of mechanics, physical structure and muscular movements in various physical education activities.

PE324. Dance Program for Summer Camps. Spring term. M. 5-7. 2 s. c. Taiz.

Organization of technique at age levels; improvisation; use of tap, folk, and modern; planning of programs and music; cooperation with other activities; constructive use of jazz.

PE325. Dance Composition II. Prerequisite, Dance Composition I. Spring term. Hours to be arranged. 2 s. c. Taiz.

More advanced practice in individual and group compositions using the pre-classic dance forms as controls.

PE400. Techniques of Officiating. Both terms. Women, M., Th. 11; Men, W. 2-4. 1 s. c. Burdick, Farquhar, Welsh, Glascott.

Theory and practice of officiating athletic contests; opportunity to officiate is provided.

PE401. Athletic Coaching. Both terms. M., Th. 2-4. 2 s. c.

Section I—Women. Burdick, Farquhar, Lysle, Welsh.

Methods of coaching archery, basketball, hockey, tennis, etc.; practice in coaching.

Section II—Men. Dallmar, Doherty, Munger, Scott.

Methods of coaching baseball, basketball, soccer, track and field; practice in coaching.

PE402. Athletic Training. Spring term. W. 11-1. ½ s. c. Mercer.

Prevention and care of injuries in physical education and athletics; bandage and massage.

PE403. Introduction to Testing. Fall term. Tu. 2-4. ½ s. c. Berridge.

Fundamentals of testing in physical education; selection and use of tests of motor ability, physical fitness, skill, etc.

PE404. Out of Door Activities. Both terms. W. 9-11. 1 s. c. Berridge.

Theory and practice of the use of arms; construction of fishing flies; casting, etc.; field experience.

PE420. Planning Programs in Physical Education. Spring term. M., Th. 11. 2 s. c. Berridge or Meredith.

The planning of programs; criteria for selecting activities; determination of objectives, selection of activities, measurement of outcomes.

PE510. Teaching and Coaching of Swimming and Diving. Fall term. W. 6.30-8.30. 2 s. c. Medica.

History and evolution; theory of swimming and diving; analysis of strokes and dives; discussion of teaching and coaching methods on the advanced and competitive levels; organizations in competitive swimming.

PE511. The Techniques and Mechanics of Officiating. Fall term. Th. 6.30-8.30. 2 s. c. Glascott.

The theory and practice of officiating athletic contests with special emphasis on certain fundamental principles which have emerged from the crucible of field experience and which are common to most sports. Rules of the game, attitudes

and procedures of the official in such contests as football, basketball, baseball, track and field, swimming, soccer, etc., with field practice and demonstrations.

PE512. Philosophy and Principles of Dance. Both terms. Hours to be arranged. 4 s. c. Farquhar and Taiz.

Aesthetics of art and dance. History of dance from primitive to modern forms. Comparative study of ballet and modern dance. Dance in education.

PE520. Football Coaching Problems. Spring term. W. 4.30-6.30. 2 s. c. Munger.

Fundamentals and methods of teaching. Non-competitive problems; the coach's place in the school and community, his relation to alumni and press. Developing interest and sportsmanship, appraisal of various systems of offense and defense, advanced strategy, new rules.

PE522. Methods in the Dance. Spring term. M. 4.30-6.30. 2 s. c. Farquhar and Taiz.

Study of the dance in education; the organization of techniques and materials at different age levels; the utilization of different dance forms; the preparation of programs.

PE610. Methods in Physical Education. Fall term. Th. 4.30-6.30. 2 s. c. Berridge or Meredith.

Class organization, grouping, grading, discipline, methods of instruction and motivation.

PE611. Advanced Principles of Physical Education. Fall term. Tu. 4.30-6.30. 2 s. c. Berridge or Meredith.

The place of physical education in American education in terms of the social, political and economic forces which influence the development of programs in schools and colleges.

PE612. Health and Physical Education for the Handicapped. Fall term. Th. 4.30-6.30. 2 s. c. Mercer.

Body mechanics; abnormalities benefited by correction or specialized procedure. Classification methods. Case study and demonstration with special reference to diagnosis, measurement and treatment. Program planning for the handicapped.

PE613. Administration of Athletics. Fall term. Tu. 6.30-8.30. 2 s. c. Luehring.

The place of athletics in physical education; organization of athletics, athletic committees and associations, budget and finances, purchase and care of equipment, student manager system, management, awards.

PE617. Advanced Program Planning in Physical Education. Fall term. M. 4.30-6.30. 2 s. c. Berridge.

The planning of programs of physical education for the junior and senior high school based upon an application of sound principles of physical education.

PE623. Intramural Athletics. Tu. 4.30-6.30. Spring term. 2 s. c. Glascott or Meredith.

The organization and administration of intramural athletics in secondary

schools and colleges. History of intramurals, aims and objectives, organization of competition, health supervision, rules and regulations, promotion and publicity, etc.

PE624. Physical Education Facilities. Spring term. Tu. 6.30-8.30. 2 s. c. Luehring.

Planning and construction of the physical education plant; gymnasium, field house, stadium, swimming pool, field. Present-day plant problems; plans of buildings now in use in various parts of the country, evaluation in terms of present-day needs.

PE629. Mechanical Analysis of Activities. Spring term. W. 4.30-6.30. 2 s. c. Farquhar.

A study of the nomenclatures used and an analysis of the movements involved in physical education activities.

Recreation

R412. Introduction to Recreation. Fall term. M., Th. 11. 2 s. c. Burdick.

The purpose and function of community and industrial recreation; program planning, use of facilities, problems of administration; source materials.

R422. Recreation Program Content. Spring term. Tu., F. 11. W. 2. 2 s. c. Burdick.

Techniques and practices in those activities making up a balanced program of recreation.

R614. Foundations of Recreation. Fall term. M. 6.30-8.30. 2 s. c. Burdick.

The role of leisure and recreation; the development of a personal philosophy of recreation related to the philosophy of the profession.

R615. Camp Leadership. Spring term. S. 11-1. 2 s. c. Luehring.

A course designed to prepare students to become counselors in summer camps. An analysis of the skills, techniques and attitudes necessary for the counselor to deal effectively with campers and related problems.

R625. Administration of Camps and Camping. Fall term. S. 11-1. 2 s. c. Luehring.

Consideration of the problem involved in the administration of the summer camp; personnel, program, equipment, supplies, feeding, etc.

R626. The Summer Camp Program. Spring term. W. 6.30-8.30. 2 s. c. Doherty.

The planning of programs for the summer camp; determination of objectives, selection of activities, making of schedules, measurements of outcomes.

R641. Administration of Recreation. Spring term. M. 6.30-8.30. 2 s. c. Burdick.

Recent trends in the organization and administration of recreation; legal

aspects; budget and finance; personnel; public relations; conduct of programs; construction and maintenance of recreation areas and facilities.

HISTORY

Students in the five year program interested in History should specialize in the teaching of social studies. See page 53.

For the course in methods, see Education S534.

96. History of the United States and Pennsylvania. Both terms. No credit for one term only. 3 hrs. a wk. 6 s. c. Bining.

A basic, integrated course in which the history and contributions of Pennsylvania to national development are studied on the background of American history. This course is required for all certificates in the State of Pennsylvania.

HOME ECONOMICS[1]

Adviser: Director, Department of Vocational Teacher Education.

Students in the five year program specializing in the teaching of Home Economics should follow the curriculum as outlined on page 59.

1. Textiles. Fall or Winter term. 2 hrs. lecture; 2 hrs. laboratory. 2 s. c.

Basic factors in the selection, use and care of fabrics for clothing and household use.

2. Clothing Problems. Fall, Winter or Spring term. 6 hrs. laboratory. 2 s. c. Prerequisites, 1,7.

Construction of garments with emphasis on fabric selection, design and construction processes.

4. Introduction to Foods and Nutrition. Fall, Winter or Spring term. 1 hr. lecture; 4 hrs. laboratory. 2 s. c.

Fundamental principles of human nutrition and their application to the selection of food in relation to positive health. Calculations are made of the dietaries of the normal college girl.

5, 6. Principles and Methods of Food Preparation. Fall, Winter and Spring terms. 1 hr. lecture; 5 hrs. laboratory. 4 s. c. Prerequisites, Chem. 11, Biol. Sci. 1, parallel with 4.

Study of underlying principles involved in the preparation of the various types of food. Emphasis is placed on standards of food products and work methods.

7. Design. Fall or Winter term. 4 hrs. laboratory. 1 1/3 s. c.

Theory of design developed from analysis of structures in art and nature. Comparative study of design elements common to the fine and applied arts.

---

[1] Given in Drexel Institute Laboratories.

8. Design in Clothing. Fall, Winter or Spring term. 1 hr. lecture; 4 hrs. laboratory. 2 s. c. Prerequisite, 9.

Application of elements and principles of design to clothing in relation to the individual.

9. Design. Winter or Spring term. 4 hrs. laboratory. 1 1/3. s. c.

Fundamentals of color. Color theory and laboratory experiments in practical application of color.

12. Child Care and Development. Fall, Winter or Spring term. 3 hrs. class. 2 s. c. Prerequisites, 4 and Psych. 1.

Physical, mental, emotional and social development of the child from the prenatal through the pre-school period; processes by which development may be fostered; directed observation in nursery school.

13, 18, 23. Family Finance and Consumption Problems. Fall, Winter and Spring terms. 1 hr. class; 2 hrs. laboratory. 4 s. c. Prerequisite, Economics.

A study of the income and expenditure problems of the family group. A study of the economic and social phases in the production, distribution, and purchase of clothing, household textiles, and food products for the family group.

14. Family Meal Management. Winter and Spring terms. 1 hr. lecture; 6 hrs. laboratory. 2 2/3 s. c. Prerequisite, 15.

Management problems involved in meal preparation including menu planning, marketing, food preparation, and service; nutritional, psychological, economic, and social aspects of the service of food in the home. Laboratory experience is provided in food preparation for typical situations in family groups.

15. Family Nutrition. Fall, Winter or Spring terms. 2 hrs. lecture; 4 hrs. laboratory. 2 2/3 s. c. Prerequisites, Chemistry and Zoology.

Advanced study of the principles of nutrition as applied to the needs of the family; feeding of children at different ages; the principles underlying the diet problems at the time of pregnancy and lactation; the technique of checking qualitatively and quantitatively the adequacy of dietaries. Active participation is provided for each student in care of animals used in experimental work.

16, 17. Pattern Study. Fall, Winter or Spring term. 6 hrs. laboratory. 4 s. c. Prerequisites, 2 and 8.

Comparative study of commercial patterns and construction of garments; dress designing by the flat pattern method.

20[1]. Dress Design. Fall or Winter term. 6 hrs. laboratory. 2 s. c. Prerequisite, 17.

Creative dress designing by the draping method.

21[1]. Tailoring. Winter or Spring term. 6 hrs. laboratory. 2 s. c. Prerequisite, 17.

Tailoring problems and techniques to develop skill in designing and constructing garments.

24. Housing. Winter and Spring terms. 2 hrs. class. 1 1/3 s. c. Prerequisite, 13.

A survey of the factors and principles of present-day housing legislation. Study of the social and physical needs with reference to rental and home ownership, and consideration of the financial problems relative to purchase and maintenance.

27. Readings in Nutrition. Winter and Spring terms. 3 hrs. lecture. 2 s. c. Prerequisite, 15.

Abstracting and presentation of articles on nutritional problems in which active research is being carried on.

28. Special Problems in Child Feeding. Fall and Winter terms. 2 hrs. class; 2 hrs. laboratory. 2 s. c. Prerequisites, 12 and 15.

Conditions responsible for health and malnutrition in children; discussion of formation of desirable food habits. Laboratory study of nutritional habits of nursery school children.

30. Design in the Home. Fall, Winter or Spring term. 1 hr. class; 4 hrs. laboratory. 2 s. c. Prerequisite, 9.

Application of elements and principles of design to problems of furnishing traditional and modern types of homes. Practice in selection and arrangement of furniture, fabrics and accessories in relation to social and economic needs.

32[1]. Experimental Cookery. Fall, Winter or Spring term. 1 hr. lecture; 4 hrs. laboratory. 2 s. c. Prerequisites, Chem. 20 or 25, H. Ec. 14.

Improvement of techniques in food preparation through experimentation and analysis. Study of new food products.

33[1]. Food Demonstration Technique. Fall, Winter and Spring terms. 1 hr. lecture; 4 hrs. laboratory. 2 s. c. Prerequisite, 14.

Study through practice of the demonstration as a technique of education in the classroom, commercial work and adult education.

34. Home Administration. Fall, Winter or Spring term. 3 1/3 s. c. Prerequisite, 6.

Laboratory for Household Administration at the Home Management house. Social and managerial problems; practices in household techniques. Child care and development problems are met through care of the baby in residence.

39. Play Materials for the Nursery School. 3 hrs. lecture. 2 s. c. Prerequisite, 19.

Selection and use of play materials for pre-school children; values of play activities in the development of the child. Creative materials and their use are given special attention.

---

[1] For fifth year students.

HYGIENE

V2. Occupational Hygiene. Spring term. W. 4.30-6.30. 2 s. c. Hartmann.

The diseases and hazards of industry, their causes and prevention.

ITALIAN

Adviser: Assoc. Prof. Domenico Vittorini, Room 301, College Hall.

Students in the five year program specializing in the teaching of Italian will major in Romance Languages. They should follow the curriculum for the preparation of teachers of foreign languages as outlined on pages 43, 44.

LATIN

Adviser: Prof. Edward H. Heffner, Room 318, Bennett Hall.

Students in the five year program specializing in the teaching of Latin should follow the curriculum for the preparation of teachers of foreign languages as outlined on pages 43, 44.

For the course in methods see Education S672.

MARKETING

For courses in Marketing, men students should consult the bulletins of the College, the Wharton School, and the Wharton Evening School. Women students should consult the bulletins of the College of Liberal Arts for Women, and of the Wharton Evening School.

MATHEMATICS

Adviser: Dr. Bernard Epstein, Room 123, College Hall.

Students in the five year program specializing in the teaching of Mathematics should follow the curriculum for the preparation of teachers of Mathematics as outlined on page 45.

MECHANICAL ENGINEERING

Students interested in preparing to teach in the vocational field should follow the curricula as outlined on page 60.

These courses are open only to Vocational Teacher Education students.

2. Industrial Practice. Both terms. W., F. 4-6. 4 s. c. Prerequisite, V522. Gulick.

Elements of mechanical practice in machine work and welding. Teaching methods.

---

[1] For fifth year students.

12. Analytical Industrial Practice. Both terms. W., F. 4-6. 4 s. c. Prerequisite, 2. Gulick.

Analysis of industrial problems in machine practice, heat treatment, and autogenous welding. Teaching methods.

22. Advanced Shop Practice. Both terms. W., F. 4-6. 4 s. c. Prerequisite, 12. Gulick.

95. Technical Drafting I. Fall term. Tu., Th. 5-7. 3 s. c. Prerequisite, Ed. V522. Jorgensen.

Lettering, instruments, sketching, geometry of drafting, principal views, auxiliary views and axanometric projection.

96. Technical Drafting II. Spring term. Tu., Th. 5-7. 3 s. c. Prerequisite, 95V. Jorgensen.

Oblique projection, intersections, developments, fasteners, dimensioning, working drawings.

Course below omitted in 1951-52:

97.—*Special Machine Drawing.*

MUSIC

For a description of Music 1, 5, 6, and 7, and for additional undergraduate and graduate courses in Music, consult the bulletin of the School of Fine Arts. For courses in Music Education see page 92.

1. Harmony. Both terms. M., Th. 9. 4 s. c.

5. History of Music. Both terms. Men—Tu., F. 9, Women—Tu., F. 10. 4 s. c. Michell.

6. Classicism in Music. Both terms. M., Th. 10. 4 s. c. Krummeich.

7. Romanticism in Music. Both terms. M., Th. 11. 4 s. c. Krummeich.

10. Keyboard Harmony. Fall term. Tu., Th. 2. 2 s. c.

Harmonizing melodies at the keyboard in four-voice harmony and free piano style; improvising melodies with accompaniment utilizing various chords as presented. Transposition and harmonic analysis.

20. Sight Reading and Dictation. Both terms. M., F. 2, W. 9. 3 s. c. Scott.

(First Year.) Sight reading of two- and three-part songs and simple melodic and harmonic dictation.

21. Sight Reading and Dictation. Both terms. M., Th. 10, Tu. 3. 3 s. c. Scott.

(Second Year.) Sight reading of three- and four-part songs and melodic and harmonic dictation.

30[1]. Violin and String Instruments. Both terms. M., Th. 11. 4 s. c. Wilson.

Class instruction in violin and stringed instruments.

31. Piano. Both terms. Hours to be arranged with instructor. 4 s. c.

Technical studies; interpretation; transposition; art of accompanying. May be taken for credit for more than one year with consent of adviser.

33[1]. Clarinet and Woodwind Instruments. Fall term. M., F. 3. 2 s. c. Wilson.

Class instruction in clarinet and woodwind instruments.

35[1]. Trumpet and Brass Instruments. Spring term. M., F. 2. 2 s. c. Wilson.

Class instruction in trumpet and brass instruments.

37[1]. Percussion Instruments. Spring term. M., F. 3. 2 s. c. Wilson.

Class instruction in percussion instruments.

39. Orientation in Instrumental Music. Fall term. Tu., Th. 3. 2 s. c. Wilson.

An orientation course to assist students in acquiring an understanding of the place and function of a program of instrumental music in the elementary and secondary school.

115. University Choral Societies. Both terms. W. 7-9. 2 s. c. Not more than two semester credits may be counted toward the degree.

Entrance test required.

116. University Orchestra. Both terms. W. 4-6. 2 s. c. Not more than two semester credits may be counted toward the degree. Happich.

Entrance test required.

534. Voice. Both terms. Tu., F. 11, Th. 3. 3 s. c.

Class instruction in the fundamental principles of good vocal production with reference to posture, breathing, resonance, diction and interpretation. May be taken for credit for more than one year.

---

[1] Students enrolled in this course will be charged a rental fee for instruments. For advanced instrumental instruction refer to Music 539 and 549.

536. Choral Techniques. Both terms. M., Th. 12. 2 s. c.

Technique of group singing and conducting through standard choral literature of various types and periods. Required of Music Education Majors each year. May be taken for credit for more than one year.

538. Instrumental Ensemble. Both terms. T., F. 12. 2 s. c. Wilson.

Beginning Orchestra or Band. Required of Music Education Majors in Sophomore, Junior and Senior years. May be taken for credit for more than one year.

539. Advanced Instrumental Ensemble. Both terms. Hours to be arranged with instructor. 2 s. c. Wilson.

Performance and study of classical and modern ensemble music for advanced instrumentalists. Open only to students approved by the instructor. May be taken for credit for more than one year with consent of adviser.

540. Conducting. Both terms. M., Th. 11. 4 s. c. Scott.

Technique of conducting and elements of music interpretation. Students not registered for Music 536 concurrently with this course must reserve Tu., F. 12-1 for practice hours.

549. Musical Performance. Both terms. Hours to be arranged. 4 s. c.

Advanced private study of voice or instrument. Open only to students majoring in Music Education approved by Asst. Prof. Scott. Auditions held each term. May be taken for credit for more than one year with consent of adviser. For list of private instructors consult Office of Music Education.

PHYSICAL EDUCATION FOR MEN

1 to 4.—Required of all full-time undergraduate men. Medical and health examination and swimming test required of all entering Freshmen and transfer students upon entrance. Those failing to pass the swimming test must register for class instructions in swimming. The test must be passed during the first year of residence.

Program of instruction and participation in indoor and outdoor activities suited to present and future needs of individuals.

PHYSICAL EDUCATION FOR WOMEN

Important.—Physical Education is required for all four years.

A. Medical and Physical Examination, required of all Freshmen and new full-time students, during Freshman Week, by appointment, at the Student Health Service. At this examination each student is told of any deviations from the normal, is advised concerning their correction, and scheduled for appropriate physical activity.

B. Two hours Physical Education per week throughout each of the four years.

Freshmen—One quarter team sport, one quarter body mechanics, one quarter swimming and one quarter individual sport. The Freshman Swimming test must be passed for graduation.

Sophomores—One quarter dance fundamentals, other three quarters elective.

Juniors—Elective entire year.

Seniors—Elective entire year.

Electives

First and Fourth Quarters—Classes are held on Museum Field and Law School and River Field Tennis Courts and consist of field hockey, softball, archery, golf, tennis and lacrosse.

Second and Third Quarters—Classes are held in Weightman Hall and consist of volleyball, basketball, badminton, indoor golf and other organized games and activities.

Bowling—Special Fee. All four quarters.

Dance—Modern, tap and square, in Dance Studio. All four quarters.

Swimming—Weightman Hall Pool. All four quarters.

Rifle Marksmanship—Special Fee. All four quarters.

Social Hygiene—Bennett Hall. All four quarters.

Mental Hygiene—Bennett Hall. Spring term.

PHYSICS

Adviser: Prof. R. W. Duncan, Room 41, Randal Morgan Laboratory.

Students in the five year program specializing in the teaching of science with a major interest in Physics should follow the curriculum for the preparation of science teachers as outlined on pages 46, 47. They should complete Physics 1, 2, and 18 s. c. selected from courses for majors including two laboratory courses. Physics 1, 2, and Mathematics 8 should be completed by the end of the Sophomore year.

POLITICAL SCIENCE

Students interested in Political Science should specialize in the teaching of Social Studies. See page 48.

PORTUGUESE

Adviser: Asst. Prof. HENRY H. CARTER, Room 301, College Hall.

Students in the five year program specializing in the teaching of Portuguese will major in Romance Languages. They should follow the curriculum for the preparation of teachers of foreign languages as outlined on pages 43, 44.

PSYCHOLOGY

Adviser: Asst. Prof. F. P. BAKES, Room 20, College Hall.

Students specializing in Psychology should follow the curriculum for the preparation of special classes and corrective speech as outlined on pages 55, 56.

1. GENERAL PSYCHOLOGY. Both terms. No credit for one term only. 2 hrs. lecture; 2 hrs. laboratory. 6 s. c.

Fall Term: The lectures cover the topics: sensation, perception, memory, thinking, and the psychology of individual differences. In the laboratory the student will perform experiments dealing with these topics.

Spring Term: The lectures cover the topics: reflex, volition, habit, the relation of the nervous system to behavior, and individual differences. In the laboratory the student will perform experiments dealing with these topics.

3. ADVANCED GENERAL PSYCHOLOGY. Fall term. 2 hrs. lecture; 2 hrs. laboratory. 3 s. c. Prerequisite, 1. GEBHARD.

Perception, memory and thinking from the point of view of contemporary theory and research.

E3. EDUCATIONAL PSYCHOLOGY. Both terms. 1 hr. lecture; 1 hr. laboratory. 3 s. c. Prerequisite, 1. PRESTON and assistants.

Psychology of learning; efficient methods of learning; role of motivation in learning; acquisition of skill; transfer of training. Individual differences, their nature, extent and measurement.

E3C. EDUCATIONAL PSYCHOLOGY. Both terms. S. 9-11. 3 s. c. PRESTON.

4. ADVANCED GENERAL PSYCHOLOGY. Spring term. 2 hrs. lecture; 2 hrs. laboratory. 3 s. c. Prerequisite, 3. GEBHARD.

Action and behavior from the point of view of contemporary theory.

29. CHILD PSYCHOLOGY AND ADOLESCENCE. Fall term. 2 hrs. a wk. 2 s. c. Prerequisite, 1. MILLER.

Psychology of infancy, childhood and adolescence.

29C. CHILD PSYCHOLOGY AND ADOLESCENCE. Fall term. W. 7-9. 2 s. c. HURLOCK.

30. Introduction to Clinical Psychology. Fall term. 2 hrs. a wk. 2 s. c. Prerequisite, 1; and 59 concurrent. Bakes, Sylvester.

Lectures on selected topics in clinical psychology. Occasional clinical demonstrations from the Psychological Clinic.

31. The Methods and Practice of Clinical Psychology. Spring term. 2 hrs. a wk. 2 s. c. Prerequisites, 30 and 59. Bakes, Sylvester.

A survey of the diagnostic and therapeutic methods employed in clinical psychology, illustrated by the study of individual cases.

32. Introduction to Speech Correction. Both terms. No credit for one term only. Fall term, 2 hrs. lectures and demonstrations. Spring term, 1 hr. lecture and 2 hrs. practicum. 4 s. c. Prerequisite, 30. Bakes.

Fall Term: Survey of the problems of defective speech; demonstrations of methods of examination and diagnosis of various types of speech disorders.

Spring Term: Lectures and demonstrations of corrective procedures; supervised practice teaching in The Speech Clinic.

33. Diagnostic and Remedial Teaching. Both terms. Either term may be taken for credit. 3 or more hours. 2-4 s. c. Prerequisites, 30 and 59. Murphy, Sylvester and Seidman.

Supervised diagnostic and remedial teaching of exceptional children in the Psychological Clinic supplemented by lectures and discussions.

34. Special Class Arts and Crafts. Both terms. Either term may be taken for credit. 4 hrs. 6 s. c. Prerequisites, 30 and 59. Seidman.

Practice in the application of Special Class Arts and Crafts to the problems of diagnostic teaching.

35. Psychology of Speech and Hearing. Fall term. 2 hrs. 2 s. c. Prerequisite, 30. Bakes.

Study of normal speech development in the child, and the integration of language functions. Analysis of the hearing function and of the audiometric methods.

36. Speech Pathology. Spring term. 2 hrs. 2 s. c. Prerequisite, 30. Bakes.

Study of disorders of speech with emphasis upon theory and research. Concerned especially with stuttering, cerebral palsy, aphasia and hearing impairment.

54. Psychological Techniques for the Selection and Classification of Personnel. Spring term. 2 hrs. 2 s. c. Prerequisite, 59. Viteles and Wilkinson.

Psychological techniques in job analysis and psychometric methods for the selection and classification of personnel in education, counseling, and in industry.

55. Mental Abilities, Defects and Hygiene. Spring term. Lecture and demonstration. 2 hrs. 2 s. c. Prerequisites, 30 and 59. Murphy.

The analysis of abilities and defects with special reference to the relation between normal and abnormal behavior.

58. Psychological Methods in Vocational Guidance. Fall term. 2 hrs. 2 s. c. Prerequisite, 54. Viteles and Wilkinson.

Objective techniques and demonstrations in the use of the clinical method for the analysis of individual abilities, temperament traits, occupational interests, and social data for guidance purposes.

59. Tests and Measurements. Fall term. 2 hrs. 2 s. c. Prerequisite, 1; and 30 concurrent. Badenhausen.

The development, administration, and interpretation of individual and group tests of general intelligence, special abilities, temperament and character. Laboratory practice in administering such tests.

59C. Clinical Tests and Measurements. Fall term. Th. 5-7. 2 s. c. Prerequisite, 1; and 30 concurrent. Badenhausen.

60a. Field Work in Social Service. Both terms. 1 hr. class a wk. and 6 hrs. of assigned field work. No credit for one term only. 8 s. c. Prerequisite or concurrent, 30, Senior standing and permission of instructor. Limited enrollment. Sylvester.

Orientation in the application of psychological techniques contributing to social service; individual and group conferences.

60b. Field Work in Vocational and Industrial Psychology. Both terms. Either term may be taken for credit. 1 hr. class a wk. and as assigned. 4 s. c. Prerequisite or concurrent, 58, Senior standing and permission of instructor. Limited enrollment. Viteles and Wilkinson.

Orientation in the application of psychology in industry and vocational guidance; individual and group conferences.

60e. Field Work in Psychological Testing. Both terms. Either term may be taken for credit. 4 hours. Hours as assigned. 4 s. c. 2 or 4 hours. Hours as assigned. 2 or 4 s. c. Prerequisites, 31 and 54, Senior standing and permission of instructor. Murphy, Bakes, Sylvester.

Orientation in the application of verbal and non-verbal techniques contributing to clinical diagnosis; individual and group conferences.

60f. Field Work in Speech Correction. Both terms. 4 hours. 3 hrs. class a wk. and as assigned. 4 s. c. Prerequisite, 32, Senior standing and permission of instructor. Limited enrollment. Bakes.

Orientation in the application of psychological methods contributing to the examination, diagnosis and correction of speech disorders; individual and group conferences.

80. Motivation. Fall term. 2 hrs. 2 s. c. Prerequisite, 1. Irwin.

The experimental findings and theoretical treatment of human and animal motives. The characteristics of motives, their origins, development, and dependence upon physiological, psychological, and social conditions. The effects of motives upon various performances. Interrelations among motives: hierarchies, types of conflict situations and their results in behavior.

81. Social Psychology. Spring term. 2 hrs. 2 s. c. Prerequisite, 1. Diggory.

Analysis of attitude structure and formation, particularly with respect to social conditions. Psychological factors in morale and leadership. Institutional behavior. Social conditions of motivation. Opinion research. Psychology of propaganda. Individual differences as functions of group classification.

RUSSIAN

Adviser: Prof. Alfred Senn, 111 Bennett Hall.

Students specializing in the teaching of Russian should follow the curriculum for the preparation of teachers of foreign languages as outlined on pages 43, 44. Before being approved as a major the candidate must have an interview with the adviser.

SHORTHAND, TYPEWRITING AND CLERICAL PRACTICE

Only students enrolled in the curriculum for the preparation of business teachers may take these courses.

Clerical Practice 1. Principles of Clerical Practice. Both terms. Tu., W., F. 12. 3 s. c. Laboratory fee, $4.00. Prerequisite, proficiency in typewriting.

Shorthand 1. Principles of Gregg Shorthand. Both terms. M., Th., F. 2, W. 9. 5 s. c.

Shorthand 2. Advanced Shorthand. Both terms. M., Th. 12, W. 3. 4 s. c.

Shorthand 2 must be taken concurrently with Typewriting 2.

TYPEWRITING 1. PRINCIPLES OF TYPEWRITING. Both terms. M., Tu., Th., F. 3. 3 s. c. Laboratory fee, $3.00.

TYPEWRITING 2. ADVANCED TYPEWRITING AND TRANSCRIPTION. Both terms. M., F. 2, W. 9. 3 s. c. Laboratory fee, $3.00.

Students who do not have command of shorthand may substitute machine transcription.

SOCIAL STUDIES

Advisers: Assoc. Prof. T. E. McMULLIN (undergraduate and fifth year students), Eisenlohr Hall and Dr. S. H. PATTERSON (graduate students), Room 215, Logan Hall.

Students in the five year program interested in Economics, History, Political Science and Sociology should specialize in the teaching of Social Studies. See page 48.

For the course in methods see Education S534.

SOCIAL WORK

The Pennsylvania School of Social Work is affiliated with the University. Certain courses in this school are open for credit to properly qualified students in the School of Education. These are graduate courses and may be accepted for credit toward the degrees of Master of Science in Education and Doctor of Education with the approval of the adviser. They offer the opportunity to study the principles and methods of social case work and to secure some practical experience in such work. They are a necessary part of the training of the counselor and very desirable for the teacher and the principal. Students register in the Pennsylvania School of Social Work, 2410 Pine Street, Philadelphia, and must be approved by the director of the extension department of that school. For description of courses, see the Bulletin of the Pennsylvania School of Social Work.

SOCIOLOGY

Students interested in Sociology should specialize in Social Studies. See page 48.

For the methods course, see Education S534, page 95 of this bulletin.

It is not the intention of the Sociology Department to administer the regulation with regard to prerequisites in the College for Women so as to work any hardship on students entering the School of Education from other institutions. Students desiring to enter advanced courses should consult the department.

SPANISH

Adviser: Prof. Otis H. Green, Room 311, College Hall.

Students in the five year program specializing in the teaching of Spanish should follow the curriculum for the preparation of teachers of foreign languages as outlined on pages 43, 44. Before being approved as a major in Spanish the candidate must arrange for an interview with the departmental adviser.

New students who plan to register for work in Spanish beyond the elementary course are required to take a placement examination which will be held during the registration period.

Spanish 1 may be taken as required work.

The following courses arranged specifically for those specializing in the teaching of Spanish are required according to recommendations of the adviser.

14. Advanced Spanish Composition. Both terms. 2 hrs. a wk. 4 s. c. Prerequisite, 4. Clavería.

Formal and informal composition and training in the writing of Spanish.

15C. Advanced Conversation and Composition. Both terms. 2 hrs. a wk. 4 s. c. Prerequisite, 4C. Clavería.

Training in the writing of Spanish, including narration, description and exposition.

16. Advanced Spanish Syntax. Both terms. 2 hrs. a wk. 4 s. c. Prerequisite, 4. Green.

A review of the fundamental points of syntax; formal and informal composition.

19. Advanced Spanish Conversation. Both terms. 2 hrs. a wk. 4 s. c. Prerequisite, 4. Suárez.

For students who wish to increase their ability to understand and speak Spanish.

300. Conference Course for Majors in Spanish. Both terms. 2 hrs. a wk. 8 s. c. Green.

This course is designed to extend and correlate the work of the entire major program.

ZOOLOGY

Adviser: Asst. Prof. R. G. Schmieder, Room 320, Zoölogy Building.

Students specializing in the teaching of science with a major interest in Zoölogy should follow the curriculum for the preparation of science teachers as outlined on pages 46, 47. They should complete at least 20 semester credits in Zoölogy in addition to Zoölogy 1. They are also required to read selected books from a list prepared by the department of Zoölogy.

UNIVERSITY OF ILLINOIS-URBANA
3 0112 112017386

UNIVERSITY BULLETIN ANNOUNCEMENTS

Detailed information concerning the admission requirements and courses of the several schools of the University is available in Bulletin Announcements issued by each school. Copies may be had without charge by addressing a request to the Deans or Directors indicated below.

ADMISSIONS. (Information concerning Undergraduate Schools.) *Dean of Admissions, Hare Building.*

THE COLLEGE (including Arts and Sciences). *Dean, College Hall.*

THE COLLEGE COLLATERAL COURSES. *Director, 116 College Hall.*

THE SUMMER SCHOOL. *Director, 116 College Hall.*

THE TOWNE SCIENTIFIC SCHOOL (including courses in Chemistry, Chemical, Mechanical, Civil Engineering and Metallurgy). *Dean, Engineering Building.*

THE MOORE SCHOOL OF ELECTRICAL ENGINEERING. *Dean, Moore School, 33rd and Walnut Streets.*

THE WHARTON SCHOOL OF FINANCE AND COMMERCE. *Dean, Logan Hall.*

THE GRADUATE DIVISION OF THE WHARTON SCHOOL. *Director of the Graduate Division, Logan Hall.*

THE SCHOOL OF EDUCATION (including the Five Year Curriculum, the Graduate Division and the Illman-Carter Unit). *Dean, Eisenlohr Hall, 3812 Walnut Street.*

THE SCHOOL OF FINE ARTS (including Architecture, Music and Fine Arts). *Dean, Fine Arts Building.*

THE COLLEGE OF LIBERAL ARTS FOR WOMEN. *Dean, Bennett Hall.*

PROGRAMS FOR WOMEN. *Dean of Women, 114 Bennett Hall.*

THE GRADUATE SCHOOL OF ARTS AND SCIENCES. *Dean, Bennett Hall.*

THE SCHOOL OF MEDICINE. *Dean, Medical Laboratories Building.*

THE GRADUATE SCHOOL OF MEDICINE. *Dean, Medical Laboratories Building.*

THE SCHOOL OF VETERINARY MEDICINE. *Dean, Veterinary Building.*

THE LAW SCHOOL. *Dean, Law School Building.*

THE SCHOOL OF DENTISTRY. *Dean, Evans Institute Building.*

THE SCHOOL OF SOCIAL WORK. *Dean, 2410 Pine Street, Philadelphia 3.*

THE SCHOOL OF NURSING. *Dean, 3400 Spruce Street, Philadelphia 4.*

THE COURSES IN ORAL HYGIENE. *Dean of School of Dentistry, Evans Institute Building.*

THE SCHOOL OF AUXILIARY MEDICAL SERVICES (Physical Therapy and Occupational Therapy). *Dean, 34th Street below Walnut.*

THE EVENING SCHOOL OF ACCOUNTS AND FINANCE. *Director, Logan Hall.*

THE EXTENSION SCHOOLS. *Director, Logan Hall.*

THE DEPARTMENT OF MILITARY SCIENCE AND TACTICS, RESERVE OFFICERS' TRAI[illegible] ING CORPS. *Commandant, Anthony Wayne Hall.*

THE DEPARTMENT OF NAVAL SCIENCE AND TACTICS, RESERVE OFFICERS' TRAI[illegible] CORPS. *Commandant, Stephen Decatur Hall.*

[illegible] DEPARTMENT OF AIR SCIENCE AND TACTICS, RESERVE OFFICERS' [illegible] *Commandant, Anthony Wayne Hall.*

[illegible] *Dean of Student Affairs, College Hall.*